



MAY 27 2011

## WATER QUALITY PROGRAM

State of Washington

## DEPARTMENT OF FISH AND WILDLIFE

Mailing Address: 600 Capitol Way N Olympia, WA 98501-1091 (360) 902-2222, TDD (360) 902-2207  
Main Office Location: Natural Resources Building 1111 Washington Street SE Olympia, WA

May 25, 2011

Jonathan Jennings  
Aquatic Pesticide Program  
Department of Ecology  
P.O. Box 47600  
Olympia, Washington 98504-7600

NPDES Permit WA0041009  
Annual Report

Dear Mr. Jennings:

Enclosed are Washington Department of Fish and Wildlife's Post-Treatment Discharge Monitoring Reports for Cee Cee Ah Creek (Pend Oreille County) treated on September 30 – October 2, 2010; Beda Lake (Grant County) treated September 15-16, 2010; Desert Lakes Chain (Grant County) treated September 16, 2010, Windmill-Canal Lakes Chain (Grant County) treated October 4-15, 2010, Heart Lake (Grant County) treated October 5, 2010, Martha Lake (Grant County) treated October 26, 2010 and Upper, Lower and West Caliche Lakes (Grant County) treated October 26, 2010. In all, 19 lakes and one stream were directly treated with or exposed to rotenone and were monitored under the requirements of NPDES Waste Discharge Individual Permit Number WA0041009 during the fall of 2010. All other pertinent documentation as mandated by the reporting requirement under S3.A of NPDES Waste Discharge Individual Permit Number WA0041009 is included. Zooplankton monitoring as required by NPDES Waste Discharge Individual Permit Number WA0041009 is enclosed in this packet but reported separately from the Post-Treatment Discharge Monitoring Reports.

Also enclosed is a copy of the amended FSEIS for the lakes proposed for treatment in the fall of 2010, including all SEPA comments, results and decisions, as well as the 2011-2012 Lake and Stream Rehabilitation Proposal list.

Please feel free to contact me at 360-902-2738 or email [james.uehara@dfw.wa.gov](mailto:james.uehara@dfw.wa.gov) with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Uehara".  
Jim Uehara  
Inland Fish Program Manager

Enclosures

State of Washington

Washington State Capitol

1000 Madrona Way NE

Olympia, WA 98504-6000

cc: Craig Burley, WDFW Olympia  
Chris Donley, WDFW Spokane

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Tom Yekune 5/25/2011

# **POST-TREATMENT DISCHARGE MONITORING REPORTS FOR 2010-2011**

DEPARTMENT OF ECOLOGY

## **Pend Oreille County**

Cee Cee Ah Creek

MAY 27 2011

WATER QUALITY PROGRAM

## **Grant County**

Beda Lake

Desert Chain Lakes

Windmill-Canal Chain Lakes

Heart Lake

Martha Lake

Upper, Lower and West Caliche Lakes

1970-1971 - 1971-1972

1971-1972

1971-1972 - 1972-1973

**CEE CEE AH CREEK  
POST-REHABILITATION REPORT 2010**

William P. Baker  
Washington Department of Fish and Wildlife  
Fish Management Division  
District 1  
755 S. Main St.  
Colville, WA 99114

Chris Donley  
Washington Department of Fish and Wildlife  
Fish Management Division  
District 2  
2315 N Discovery Place  
Spokane Valley, WA 99216

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## **Project Description and Purpose**

### **Water Name:**

Cee Cee Ah Creek

### **Geographic Location:**

Pend Oreille County – Section(s) 1, 11, 12, 14, 15, 21, 22, and 28, Township 34 North, Range 44 East

### **Date(s) Treated:**

September 30 – October 2, 2010

In fall 2008, the Washington Department of Fish and Wildlife (WDFW) and Kalispel Tribe of Indians Natural Resources Department (KNRD) attempted to eradicate non-native brook trout *Salvelinus fontinalis* from the upper 5.15 miles of Cee Cee Ah Creek, through the use of the piscicide rotenone, with the intention of reintroducing native westslope cutthroat trout *Oncorhynchus clarkii* var. *lewisi*. Westslope cutthroat trout were native to Cee Cee Ah Creek but were extirpated from this stream reach sometime between 1996 and 2002, likely due to negative interactions with brook trout (Donley 2009). This section of stream was selected for brook trout eradication because it was located above a barrier falls that eliminated natural brook trout re-colonization of the stream. Following two rotenone treatments conducted on Cee Cee Ah Creek in 2008, brook trout densities were reduced drastically (Donley 2009), though they were not fully eradicated (J. Connor, KNRD, personal communication). Therefore, additional rotenone treatments were executed in fall 2009 (Baker and Donley 2010) and 2010.

Upper Cee Cee Ah Creek (Figure 1) was treated September 30 – October 2, 2010 with liquid rotenone at a concentration of 0.5 parts per million (ppm). Rotenone was applied using California Drip Cans spaced approximately one-hour (flow time) apart throughout the treatment area. Backpack sprayers and powdered rotenone sand-mixture were used to treat backwater and spring areas. During treatment the stream was closed to angling and other recreational uses.

### **Physical Characteristics of Cee Cee Ah Creek**

Water quality parameters were collected from within the project area (Figure 2) prior to implementation of the project (Table 1).

**Table 1. Water quality parameters collected for Cee Cee Ah Creek including temperature, dissolved oxygen, pH, specific conductivity, turbidity and flow (cfs).**

SITE	DATE	TEMP(C)	DO mg/L	pH	SP COND us/cm	TURB (Ntu)	Q (cfs)
CCA2	13-Sep	7.7	10.0	7.3	46.3	0.4	1.0

## **Rotenone Treatment**

### **Treatment Design**

The upper 5.15 miles of Cee Pee Ah Creek was re-treated with rotenone at a concentration of 0.5 ppm, following previous treatments in fall 2008 and 2009. Treatment stations were set up in the same locations established in 2008, approximately one-hour (flow time) apart (Figure 2). Flow times were estimated from dye tracing conducted in October 2007 (Donley 2009). Discharge was similar in 2010 to that recorded in 2008 and 2009 (Baker and Donley 2010).

### **Toxicant Used**

Rotenone – Cube powdered Fish Toxicant EPA Reg # 6458-6, Liquid CFT Legumine EPA Reg # 75338-2.

### **Application Method(s)**

Powdered rotenone (7.4 percent active ingredient) was used for sand mixture. The sand mixture formula was a combination of one pound powdered rotenone to one pound of clean sand to two ounces of gelatin and the appropriate amount of water to make a dry mud mix. Approximately 16 pounds (8 pounds of powdered rotenone) of rotenone sand mixture was used per treatment. Sand mixture was applied to those areas that recharged with groundwater too rapidly to retain lethal doses of liquid rotenone, such as seeps and springs, as well as areas that were disconnected from the channel which prevented fish exposure to treated water.

Liquid rotenone (5 percent active ingredient) was dispensed from California drip cans directly into the stream. In addition, crews treated backwaters and springs with backpack sprayers. Liquid rotenone was discharged at a rate sufficient to keep a constant concentration of approximately 0.5 ppm in the entire treatment reach (Table 1). The two small headwater ponds were not treated in 2010, as no fish survived the previous treatments in 2008 and there was no surface-water connection during the time between treatments in 2008 and 2009. Total liquid rotenone used for the 2010 treatment was 2.97 gallons.

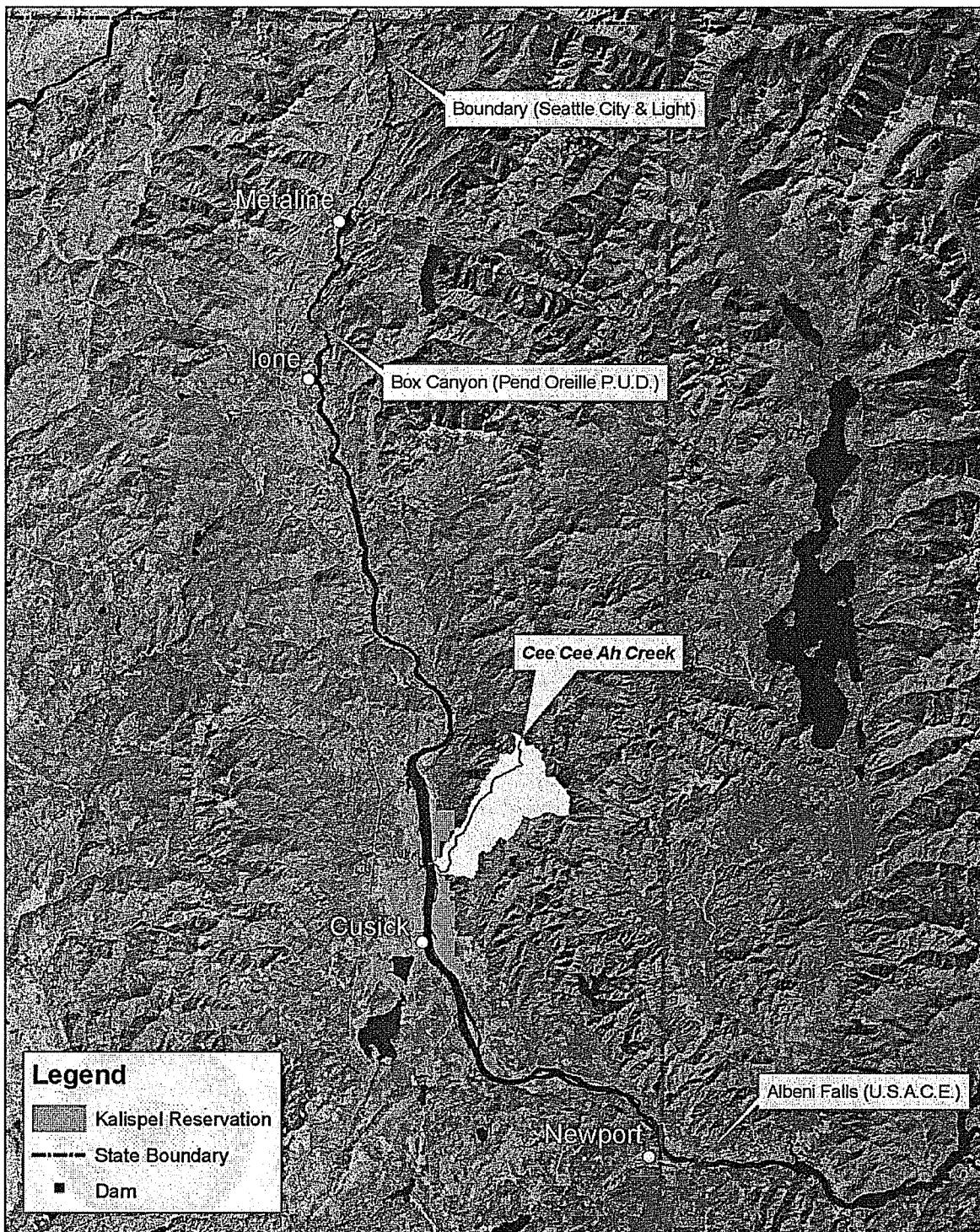
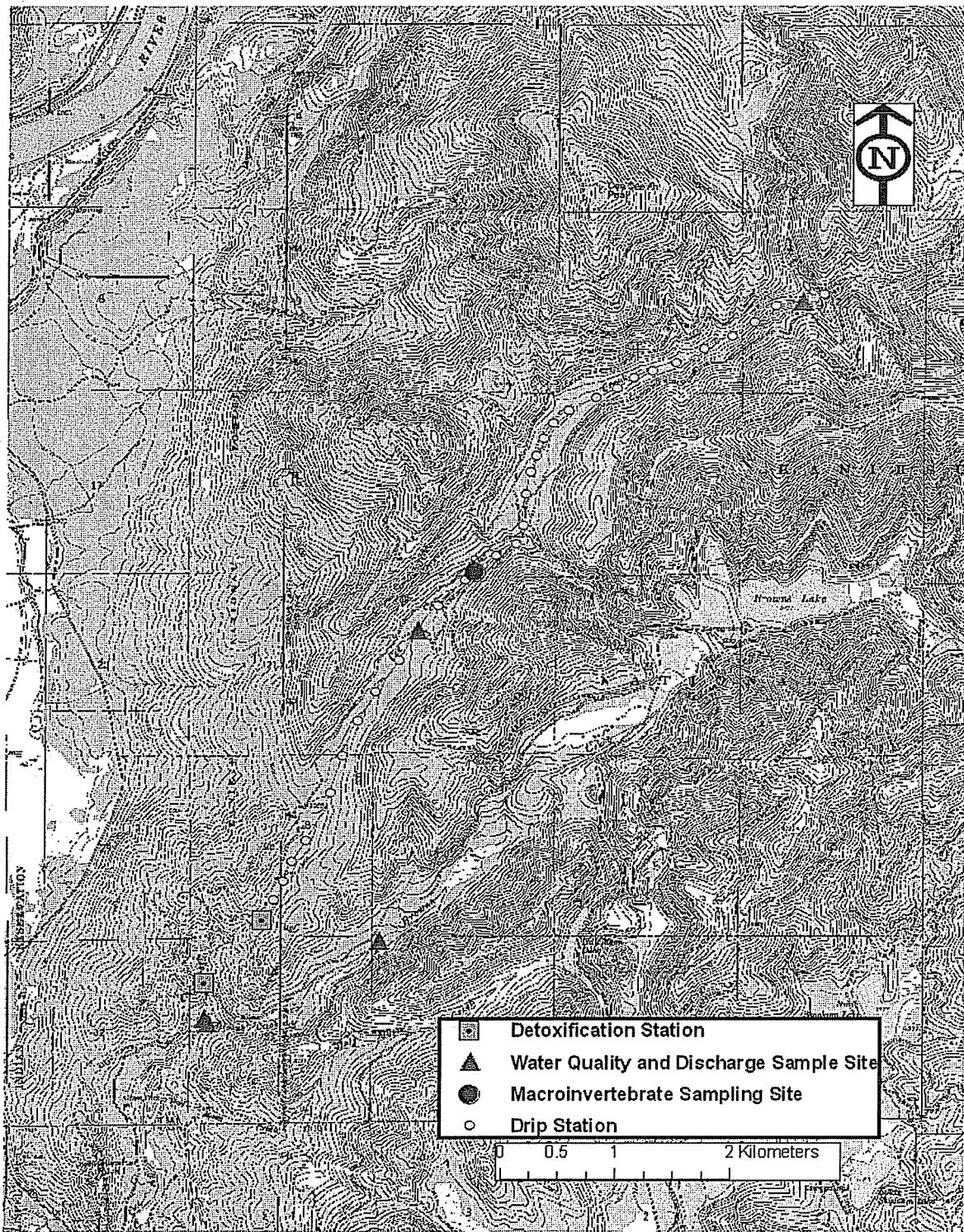


Figure 1. Pend Oreille River from Pend Oreille Lake to Canadian Border including Cee Cee Ah Creek Watershed.



**Figure 2. Map of Cee Cee Ah Creek treatment area.**

## **Rotenone Application**

The 5.15 reach of Cee Cee Ah Creek was treated with rotenone between September 30 and October 2, 2010. The stream reach was broken into 31 treatment sections. Each treatment section was outfitted with a treatment packet containing a 5-gallon California drip can, 500 ml screw top rotenone vessel with the prescribed amount of rotenone for the assigned treatment reach, safety gear (protective glasses and rubber gloves), 1000 ml graduated cylinder, handheld VHF radio, stopwatch, flashlight, notebook, pencils, and a 5-gallon bucket.

California drip cans were deployed at the upper end of each treatment sections, with prescribed amounts of rotenone to be dripped into the creek during a 4 hour treatment period (Table 2). A staff member assigned to each drip station was directed to charge his/her drip can with the prescribed amount of rotenone and top the drip can off with water. The action from filling the can with water was assumed to mix the rotenone thoroughly into solution so that it was consistently delivered to the stream during the 4-hour treatment period. The California drip can outlet had an adjustable outlet valve allowing flow from the drip can to be calibrated. Flow from the drip can was calibrated using a 1000 ml graduated cylinder and stopwatch. The flow rate required to empty the 5-gallon drip can into the creek during a 4-hour treatment period at the prescribed concentration was 78 ml/minute.

In concert with the drip cans, rotenone was distributed by roving teams outfitted with rotenone sand mixture and liquid rotenone 5-gallon backpack sprayers. Three teams were deployed to treat backwaters, side channels, and seep areas.

Staff members were directed to arrive at their assigned station 30 minutes prior to implementation time to set up and prepare for dispersal of rotenone. Treatments began simultaneously to facilitate thorough application of the rotenone. Because of the size and scope of the project, a staff of 32 people was involved during the treatment (Attachment A). To comply with the Washington Department of Agriculture pesticide application regulations, there were 14 licensed pesticide applicators working within the treated area. Licensed applicators were distributed in the project area to provide for eyeshot and earshot coverage of the project staff. All staff, including licensed applicators, were outfitted with handheld radios to facilitate safety and effective communication.

## **Rotenone Bioassay**

Every odd numbered treatment station received a bioassay cage and 5 live triploid rainbow trout to allow for observation of rotenone delivery and toxicity timing. Live boxes were placed at the upstream end of each odd numbered reach, and applicators were instructed to take detailed notes on when fish appeared to be affected by rotenone (erratic behavior) and when they succumbed to rotenone (loss of equilibrium). This measure was taken to determine if flow time calculations were correct for each treatment reach. The mean time to recognizing rotenone exposure behaviors at each bioassay station was 1.72 hours from commencement of treatment; slightly longer than the mean of time of 1.34

hours measured in the 2009 treatment. The mean time for loss of equilibrium was 2.27 hours from commencement of treatment; also slightly longer than recorded in 2009. Mean time until death was 2.81 hours.

**Table 2. Section number and estimated flow for each section during time of treatment and milliliters of rotenone applied per section.**

Section Number	Flow (cfs)	Treatment (ml of rotenone)	Section Number	Flow (cfs)	Treatment (ml of rotenone)
1	0.5	102	17	0.85	175
2	0.5	102	18	0.85	175
3	0.5	102	19	1.0	205
4	0.5	102	20	1.0	205
5	0.5	102	21	1.0	205
6	0.75	155	22	1.0	205
7	0.75	155	23	1.0	205
8	0.75	155	24	1.0	205
9	0.75	155	25	1.0	205
10	0.75	155	26	1.0	205
11	0.75	155	27	1.0	205
12	0.75	155	28	1.0	205
13	0.85	175	29	1.0	205
14	0.85	175	30	1.0	205
15	0.85	175	31	0.75	155
16	0.85	175	Total	-----	5260 ml

## **Rotenone Detoxification**

### **Detoxification Design and Implementation**

Deactivation of rotenone was conducted at two locations (Figure 2) using potassium permanganate ( $KMnO_4$ ). Detox Station 1 was located at the barrier waterfall and Detox Station 2 was located 30 minutes (flow time) downstream (Figure 2). These locations are the same as those used for treatments in 2008 (Donley 2009). Two deactivation stations were utilized to prevent accidental distribution of rotenone beyond the project area. No dead or distressed fish were found beyond the prescribed treatment area.

Detoxification was initiated one half hour prior to delivery of rotenone to the stream and was conducted until detectable amounts of rotenone were no longer present.

### **Application Method and Rate**

A 1% solution of  $KMnO_4$  was applied to the stream at both deactivation stations using 55-gallon Mariotte bottles (Figure 3), containers devised to deliver fluids at a constant

rate without automation (Engstrom-Heg 1971a; Parmenter and Fujimara 1994). Mariotte bottles allowed for mixing of mass quantities of KMnO<sub>4</sub> solution.

In past treatments, a 2.5% KMnO<sub>4</sub> solution was used for rotenone deactivation. However, KMnO<sub>4</sub> will not stay in a 2.5% solution at temperatures encountered during fall rotenone treatments in eastern Washington, as KMnO<sub>4</sub> particulate forms, reducing the effective delivery concentration of the solution. Past treatments have required constant agitation of 2.5% KMnO<sub>4</sub> solution in order to avoid “settling out”. In 2010, a 1% solution of KMnO<sub>4</sub> was used for rotenone deactivation and at this concentration, it remained in solution throughout the temperature range experienced during the treatment. To create a 1% solution, 0.4 lbs of KMnO<sub>4</sub> was mixed with 5 gallons of water (for a 53 gallon Mariotte bottle, 4.3 lbs KMnO<sub>4</sub> powder was mixed with water to produce a 1% solution).

Based on biochemical organic demand (BOD) and rotenone concentration, deactivation in the stream required 2.5 mg/L KMnO<sub>4</sub>; 0.5 mg/L to neutralize the rotenone and roughly 2.0 mg/L to account for the BOD. Additional KMnO<sub>4</sub> demand can result from organic matter in the stream substrate (Engstrom-Heg 1976; Steve Parmenter, California Department of Fish and Game, personal communication). Detox Station 1 delivered a 1% KMnO<sub>4</sub> solution at a constant rate of 700 ml/min to achieve a concentration of 4 mg/L KMnO<sub>4</sub> ( $Q = 1 \text{ cfs}$ ) in the stream at input. At this delivery rate, Mariotte bottles emptied in about 4.8 hours. Detox Station 2 delivered a 1% KMnO<sub>4</sub> solution at a constant rate of 525 ml/min to maintain a concentration of 3mg/L KMnO<sub>4</sub> ( $Q = 1 \text{ cfs}$ ) in the stream at input. At this delivery rate, Mariotte bottles emptied in about 6.4 hours.

In-stream measurements of KMnO<sub>4</sub> concentration were conducted throughout the treatment directly upstream of Detox Station 2, every 4-6 hours, using a Hach model DR/820 colorimeter and procedures described for measuring BOD, described in the following section. Continual monitoring of KMnO<sub>4</sub> concentration allowed for adjustment of the application rate of 1% KMnO<sub>4</sub> solution to the stream, so that a residual concentration of .05 – 1.0 mg/L KMnO<sub>4</sub> was maintained in the stream at all times.

### Determination of Biochemical Organic Demand

BOD was determined by colorimetry on September 29, 2011, prior to application of rotenone or KMnO<sub>4</sub>. Water samples were collected from two sites on Cee Cee Ah Creek; one near Detox Station 2 and another near the road crossing in treatment section 22. Two ml of Hach standard manganese solution (10.0 mg/L as Manganese) was added to 8 ml of stream water, and a measurement of KMnO<sub>4</sub> concentration was made using a Hach model DR/820 colorimeter, following a 30 minute contact time between stream water and stock solution (necessary time for chemical reaction to take place between BOD and KMnO<sub>4</sub>). In a laboratory, using deionized water (BOD = 0), this solution results in a 6.0 mg/L KMnO<sub>4</sub> concentration. In the field, using stream water, this solution resulted in a 4.0 mg/L KMnO<sub>4</sub> concentration at both sites. Subtracting the reading of 4.0 mg/L from the 6.0 mg/L concentration of the stock solution results in a measured BOD of

2.0 mg/L. This is close to the BOD measured in 2008 (1.9 – 2.0 mg/L) and 2009 (1.7 – 1.8 mg/L) using a titration method (Donley 2009; Baker and Donley 2010).

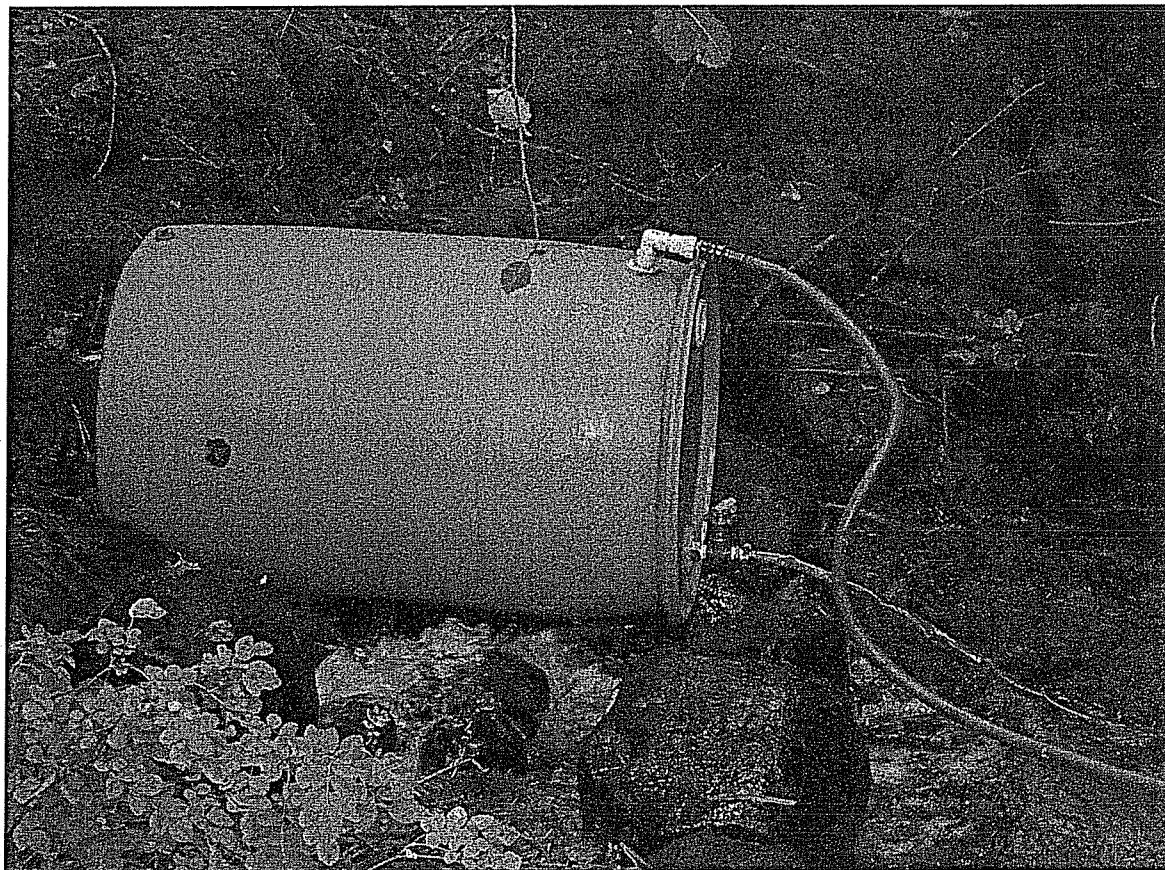


Figure 3. 55 gallon Mariotte bottle used to dispense KMnO<sub>4</sub> solution for rotenone deactivation.

### **Detoxification Bioassay**

During treatment, a bioassay box was placed 5 meters upstream of Detox Station 1, and 20 meters upstream and downstream of Detox Station 2. Based on reaction of bioassay fish, rotenone concentration reached a peak concentration of around 0.5 ppm at hour 2 of detoxification, dropping to a concentration of around 0.05 ppm by hour 28. Concentrations reduced to 0 ppm by hour 47.5.

Mortality of bioassay fish occurred only above Detox Station 1. Bioassay fish located above Detox Station 2 were unaffected. The presence of a secondary detoxification station, delivering an additional 3ppm of KMnO<sub>4</sub>, while apparently unnecessary this year, served as a backup to Detox Station 1, assuring that dispersal of rotenone outside of the project area did not occur.

Cessation of the detoxification occurred following survival of bioassay fish located 5 m above Station 1 for an exposure time of 1 hour to stream water. Survival of 1-hour exposure times for bioassay fish at Station 1 occurred by treatment hour 28. However, bioassay fish continued to exhibit signs of low-level rotenone presence, so deactivation continued until treatment hour 47.5.

### **Pre and Post Treatment Monitoring** (All monitoring was conducted as outlined in WDFW's NPDES permit WA0041009)

#### **Impact to Non-targeted Organisms**

Impacts to non-targeted organisms such as amphibians, reptiles, and mammals are unlikely. Reasons for this were discussed in Donley (2009).

Invertebrates were sampled in 2008, 2009, and 2010 prior to treatment, in accordance with Washington Department of Ecology (DOE) NPDES permit standards. The sample site (same for all years) was located within treatment section 16 (Figure 2). Samples collected in 2010 have not been analyzed as of completion of this document. Analysis of invertebrate samples collected in 2008 and 2009 has been completed.

WDFW's NPDES permit (WA0041009) requires macroinvertebrate monitoring, including "gathering benthic macroinvertebrate samples and summarizing the data using the benthic index of biotic integrity (B-IBI) and a ratio of the number of observed taxa divided by the number of expected taxa, the River Invertebrate Pediction and Classification System (RIVPACS)".

The most appropriate B-IBI model that we could find for samples from Cee Cee Ah Creek was the Idaho Department of Environmental Quality (IDEQ) Stream Macroinvertebrate Index (SMI) (Karen Adams, Abient Stream Biological Monitoring Project, DOE, personal communication). Results from 2008 sample analysis are presented in Table 3. Scores from all three samples sites fell within the category "Very good", indicating that prior to rotenone treatment in 2008, Cee Cee Ah Creek supported a robust benthic macroinvertebrate community. Results from 2009 sample analysis are presented in Table 4. The score from the 2009 sample fell into the "Good" category, indicating that Cee Cee Ah Creek still supported a healthy benthic macroinvertebrate community following the 2008 treatment. A separate report detailing the results of benthic macroinvertebrate sampling for 2008, 2009, and 2010 will be available once the 2010 samples have been analyzed.

Despite consultation with DOE (Karen Adams, DOE, personal communication) and other benthic macroinvertebrate monitoring experts, including Charles Hawkins (Utah State University) and Shannon Hubler (Oregon Department of Environmental Quality), a suitable RIVPACS model could not be found for samples collected from Cee Cee Ah Creek. RIVPACS models are dependent on reference sites within an ecoregion (Hubler 2008), and no RIVPACS model for the northern Rock Mountains ecoregion (Northeast Washington) exists. Therefore, it was agreed between WDFW (William Baker, District 1 Fish Biologist, WDFW) and DOE (Jon Jennings, Permit Administrator, Water Quality

Program, DOE) that RIVPACS analysis for the Cee Cee Ah Creek rehabilitation project was not feasible and would not be required for this project.

**Table 3. 2008 Biotic indices and associated scores for Idaho DEQ SMI.**

Biotic Indices	Site 1	Site 2	Site 3
% Indiv. w/ HBI Value	99.82	99.82	100.00
Hilsenhoff Biotic Index	3.38	3.60	3.05
% Indiv. w/ MTI Value	62.14	65.11	67.02
Metals Tolerance Index	1.12	1.30	1.11
% Indiv. w/ FSBI Value	68.66	67.99	66.67
Fine Sediment Biotic Index	147.00	138.00	134.00
FSBI - average	3.20	3.14	3.12
FSBI - weighted average	5.07	4.85	4.85
% Indiv. w/ TPM Value	85.69	69.78	73.68
Temp. Pref. Metric - average	5.33	5.16	5.77
TPM - weighted average	6.82	7.03	7.14
<b>ID DEQ SMI Score</b>	<b>88.11</b>	<b>89.20</b>	<b>89.42</b>
<b>ID DEQ SMI Rating</b>	<b>Very Good</b>	<b>Very Good</b>	<b>Very Good</b>

**Table 4. 2009 Biotic indices and associated scores for Idaho DEQ SMI.**

Biotic Indices	Site 1
% Indiv. w/ HBI Value	99.64
Hilsenhoff Biotic Index	3.67
% Indiv. w/ MTI Value	49.73
Metals Tolerance Index	1.66
% Indiv. w/ FSBI Value	63.52
Fine Sediment Biotic Index	122.00
FSBI - average	3.21
FSBI - weighted average	4.77
% Indiv. w/ TPM Value	86.57
Temp. Pref. Metric - average	4.87
TPM - weighted average	6.62
<b>ID DEQ SMI Score</b>	<b>75.03</b>
<b>ID DEQ SMI Rating</b>	<b>Good</b>

### Liquid Rotenone Formulation Longevity

Water samples, used to detect residues related to the carriers present in the liquid formulation of rotenone, were collected at 24 hours and one month post-treatment. Water samples were taken in areas of the creek where the heaviest concentrations of liquid rotenone were applied. Samples were sent to an accredited lab for analyses per EPA methods. Samples were analyzed for n-Methyl 2-Pyrrolidone and 117 volatile and semi-volatile organic compounds, including, benzene, tolulene, phenol, xylene, and derivatives of these compounds, and detection limits were 0.02-3.0 ug/l, variously. In the 24-hour post treatment sample, the semi volatile organic compound Bis(2-Ethylhexyl)Phthalate (3.2 ppb) was detected. However, this compound was also present (2.9 ppb) in the laboratory blank results (laboratory quality control). This is not a listed component of the

liquid formulation of rotenone used in the treatment (CFT Legumine), so it is highly unlikely that this compound was actually present in the water sample. Rotenone (3.6 ppb) and n-Methyl 2-Pyrrolidone (3.0 ppb) were found to be present in the 24-hour post treatment sample. In the 1-month post treatment sample, only Bis(2-Ethylhexyl) Phthalate (2.4 ppb) was reported. However, as with the 24-hour post treatment sample, this reading is suspect.

### **Period of Toxicity**

Bioassay was conducted at two stations on Cee Cee Ah Creek, beginning 24 hours post-treatment completion. Bioassay stations were located (1) at the road crossing just upstream of treatment section 22 and (2) at Detox Station 1 (Figure 2). Each bioassay sample was conducted using 5 triploid rainbow trout, and duration was 48 hours. There were no observed mortalities of fish during bioassay at either location (Table 3).

**Table 5. Bioassay dates and times for Cee Cee Ah Creek Project.**

Site	No. Fish	Species	Start Date	Start Time	End Date	End Time	No. Mortalities
Station 22	5	Rainbow trout	03-Oct	1000	05-Oct	1000	0
Station 31	5	Rainbow trout	03-Oct	1000	05-Oct	1000	0

### **Literature cited**

Baker, W. P. and C. Donley. 2010. Cee Cee Ah Creek Post-Rehabilitation Report 2009. Washington Department of Fish and Wildlife.

Donley, C. 2009. Cee Cee Ah Creek Post-Rehabilitation Report. Washington Department of Fish and Wildlife.

Engstrom-Heg, R. 1976. Potassium permanganate demand of a stream bottom. New York Fish and Game Journal 23(2): 155-158.

Hubler, S. 2008. PREDATOR: Development and use of RIVPACS-type macroinvertebrate models to assess the biotic condition of wadeable Oregon streams. Oregon Department of Environmental Quality DEQ08-LAB-0048-TR.

Parmenter, S.C. and R. W. Fujimara. 1995. Application and regulation of potassium permanganate to detoxify rotenone in streams. Proceedings of the Desert Fishes Council 26: 62-67.

**Attachment A. Project staff and Licensed Applicators.**

Name	Employer	License #	Treatment assignment
Bill Baker	WDFW	78803	Project coordinator/ Backpack sprayer/sand Rotenone deactivation
Chris Donley	WDFW	65173	Project coordinator / Rotenone deactivation
Chad Jackson	WDFW	79808	Rotenone deactivation
Brian Lyon	WDFW	43930	Rotenone deactivation
Jake Wolfe	WDFW		Rotenone deactivation
Todd Andersen	KNRD	76903	Project coordinator/ Backpack sprayer and sand/ Rotenone deactivation
Nick Bean	KNRD	76922	Backpack sprayer and sand mixture
Jason Connor	KNRD	76923	Backpack sprayer and sand mixture
Jason Olson	KNRD	76930	Backpack sprayer and sand mixture
Joe Maroney	KNRD	76928	Backpack sprayer and sand mixture
Dan McMeekan	KNRD	76904	Backpack sprayer and sand mixture
Tim Rood	KNRD		Backpack sprayer and sand mixture
Cyrus Rosenthal	KNRD		Backpack sprayer and sand mixture
Taj Salmeri	KNRD		Backpack sprayer and sand mixture
Jason Athos	KNRD		Backpack sprayer and sand mixture
Jimmy Ward	KNRD		Backpack sprayer and sand mixture
Ryan McNee	KNRD		Backpack sprayer and sand mixture
Randy Osborne	WDFW	74886	Drip station (1 and 31)
Mike Wilkinson	WDFW		Drip station (2 and 3)
Wayne Gould	KNRD		Drip station (4 and 5)
Ken Merrill	KNRD	76929	Drip station (6 and 7)
Darren Reaves	KNRD		Drip station (8 and 9)
Michele Andersen	KNRD	76906	Drip station (10 and 11) / Rotenone deactivation
Bob Gilrein	KNRD		Drip station (12 and 13)
Rod Haynes	KNRD		Drip station (14 and 15)
Matt Berger	KNRD		Drip station (16 and 17)
Chuck Littlecrow	KNRD		Drip station (18 and 19)
Jim Lemieux	KNRD		Drip station (20 and 21)
Franklin Pope	KNRD		Drip station (22)
Linda Oules	WDFW		Drip station (23 and 24)
Marc Divens	WDFW	74881	Drip station (25 and 26)
Luke Servas	KNRD		Drip station (27 and 28)
Valerie Wade	KNRD		Drip station (29 and 30)





### CERTIFICATE OF ANALYSIS

CLIENT: Washington State Dept of Fish and Wildlife  
PO Box 350  
Colville, WA 99114

DATE: 10/19/2010  
ALS JOB#: 1010020

CLIENT CONTACT: Bill Baker

CLIENT SAMPLE ID: #1

DATE RECEIVED: 10/5/2010

COLLECTION DATE: 10/1/2010 15:20

ALS SAMPLE#: -01

WDOE ACCREDITATION: C601

CLIENT PROJECT: Cee Cee Ah Creek Rehab

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/12/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/12/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/12/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/12/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/12/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/12/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/12/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP

Page 1

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

ALS Laboratory Group A Campbell Brothers Limited Company

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### CERTIFICATE OF ANALYSIS

CLIENT: Washington State Dept of Fish and Wildlife  
PO Box 350  
Colville, WA 99114 DATE: 10/19/2010  
ALS JOB#: 1010020  
CLIENT PROJECT: Cee Cee Ah Creek Rehab

CLIENT CONTACT: Bill Baker DATE RECEIVED: 10/5/2010  
CLIENT SAMPLE ID #1 COLLECTION DATE: 10/1/2010 15:20  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/12/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/12/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/12/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: Washington State Dept of Fish and Wildlife  
PO Box 350  
Colville, WA 99114 DATE: 10/19/2010  
ALS JOB#: 1010020  
CLIENT PROJECT: Cee Cee Ah Creek Rehab

CLIENT CONTACT: Bill Baker DATE RECEIVED: 10/5/2010  
CLIENT SAMPLE ID #1 COLLECTION DATE: 10/1/2010 15:20  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	10/13/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	10/13/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	10/13/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: Washington State Dept of Fish and DATE: 10/19/2010  
Wildlife  
PO Box 350 ALS JOB#: 1010020  
Colville, WA 99114 CLIENT PROJECT: Cee Cee Ah Creek Rehab

CLIENT CONTACT: Bill Baker DATE RECEIVED: 10/5/2010  
CLIENT SAMPLE ID #1 COLLECTION DATE: 10/1/2010 15:20  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	10/13/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	3.2	2.0	1	UG/L	10/13/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	10/13/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	3.0	0.050	1	UG/L	10/15/2010	ALSL
Rotenone	EPA-8270M	3.6	1.0	1	UG/L	10/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
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### CERTIFICATE OF ANALYSIS

CLIENT:	Washington State Dept of Fish and Wildlife PO Box 350 Colville, WA 99114	DATE:	10/19/2010
		ALS JOB#:	1010020
		CLIENT PROJECT:	Cee Cee Ah Creek Rehab
CLIENT CONTACT:	Bill Baker	DATE RECEIVED:	10/5/2010
CLIENT SAMPLE ID	#1	COLLECTION DATE:	10/1/2010 15:20
ALS SAMPLE#:	-01	WDOE ACCREDITATION:	C601

### DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	102	10/12/2010	GAP
Toluene-d8	EPA-8260	92.6	10/12/2010	GAP
4-Bromofluorobenzene	EPA-8260	97.4	10/12/2010	GAP
2-Fluorophenol	EPA-8270	45.0	10/13/2010	LAP
Phenol-d5	EPA-8270	42.2	10/13/2010	LAP
Nitrobenzene-d5	SW8270	88.4	10/13/2010	LAP
2-Fluorobiphenyl	EPA-8270	87.2	10/13/2010	LAP
2,4,6-Tribromophenol	EPA-8270	82.9	10/13/2010	LAP
Terphenyl-d14	SW8270	97.3	10/13/2010	LAP

U - Analyte analyzed for but not detected at level above reporting limit.





### CERTIFICATE OF ANALYSIS

CLIENT: Washington State Dept of Fish and DATE: 11/15/2010  
Wildlife ALS JOB#: 1010212  
PO Box 350 ALS SAMPLE#: -01  
Colville, WA 99114

CLIENT CONTACT: Bill Baker DATE RECEIVED: 10/29/2010  
CLIENT PROJECT: Cee Cee Ah Creek Rehab COLLECTION DATE: 10/28/2010 10:35  
CLIENT SAMPLE ID 1-6 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	11/02/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	11/02/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	11/02/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: Washington State Dept of Fish and Wildlife  
PO Box 350  
Colville, WA 99114

DATE: 11/15/2010  
ALS JOB#: 1010212  
ALS SAMPLE#: -01

CLIENT CONTACT: Bill Baker  
CLIENT PROJECT: Cee Cee Ah Creek Rehab  
CLIENT SAMPLE ID: 1-6

DATE RECEIVED: 10/29/2010  
COLLECTION DATE: 10/28/2010 10:35  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/02/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: Washington State Dept of Fish and Wildlife  
PO Box 350  
Colville, WA 99114 DATE: 11/15/2010  
ALS JOB#: 1010212  
ALS SAMPLE#: -01

CLIENT CONTACT: Bill Baker DATE RECEIVED: 10/29/2010  
CLIENT PROJECT: Cee Cee Ah Creek Rehab COLLECTION DATE: 10/28/2010 10:35  
CLIENT SAMPLE ID: 1-6 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/01/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/01/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/01/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: Washington State Dept of Fish and DATE: 11/15/2010  
Wildlife ALS JOB#: 1010212  
PO Box 350 ALS SAMPLE#: -01  
Colville, WA 99114

CLIENT CONTACT: Bill Baker DATE RECEIVED: 10/29/2010  
CLIENT PROJECT: Cee Cee Ah Creek Rehab COLLECTION DATE: 10/28/2010 10:35  
CLIENT SAMPLE ID: 1-6 WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/01/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	2.4	2.0	1	UG/L	11/01/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/01/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.38	1	UG/L	11/12/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	104	11/02/2010	GAP
Toluene-d8	EPA-8260	97.7	11/02/2010	GAP
4-Bromofluorobenzene	EPA-8260	100	11/02/2010	GAP
2-Fluorophenol	EPA-8270	43.9	11/01/2010	LAP
Phenol-d5	EPA-8270	43.2	11/01/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	Washington State Dept of Fish and Wildlife PO Box 350 Colville, WA 99114	DATE:	11/15/2010
		ALS JOB#:	1010212
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Bill Baker	DATE RECEIVED:	10/29/2010
CLIENT PROJECT:	Cee Cee Ah Creek Rehab	COLLECTION DATE:	10/28/2010 10:35
CLIENT SAMPLE ID	1-6	WDOE ACCREDITATION:	C601

### DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	EPA-8270	90.1	11/01/2010	LAP
2-Fluorobiphenyl	EPA-8270	79.8	11/01/2010	LAP
2,4,6-Tribromophenol	EPA-8270	90.0	11/01/2010	LAP
Terphenyl-d14	EPA-8270	84.0	11/01/2010	LAP

U - Analyte analyzed for but not detected at level above reporting limit.



## POST TREATMENT DISCHARGE MONITORING REPORT

**Lake Name(s):** Beda Lake

**County:** Grant

**Township:** 18N, **Range:** 26E, & **Section(s):** 15& 22

**Purpose of Treatment:** Beda Lake is a popular quality trout water located in the South Columbia Basin Wildlife Area in Grant County. This lake has a selective gear rule, one trout daily bag limit, and year-round fishing season. The fishery is maintained through annual fingerling trout plants. However, for the past 5 years, fingerling trout survival has been extremely poor due to high abundance of stunted pumpkinseed sunfish. Pumpkinseed sunfish out compete fingerling trout for aquatic micro- and macro-invertebrates. This fishery is now maintained through stocking catchable trout plants, which are expensive. In order to improve fingerling trout survival, decrease trout management costs and restore this quality trout water, pumpkinseed sunfish needed to be eradicated using rotenone.

**Name of Licensed Applicator(s):** Chad Jackson, Chris Donley, and Bob Jateff

**Lake Description:** 50 surface acres, 350.6 acre feet, and 952,981,286 pounds of water

**Mean Depth:** 7.0 feet

**Stream Description:** **Width:** N/A **Length:** N/A

**Flow Rate of Stream/Outlet (cfs):** N/A

**Name of Fish Toxicant Product Used:** CFT Legumine Liquid and Prenfish Powdered Rotenone.

**Description of Treatment Method:** The main lake body was treated using a flat bottomed boat equipped with a water pump and venturi that mixes powdered rotenone with lake water. This slurry mixture was applied evenly across the main lake body. A helicopter equipped with a tank and boom sprayers was used to treat the shoreline and backwater areas of the lake with liquid rotenone.

**Quantity of Fish Toxicant Used:** 1,703 pounds and 90 gallons of powdered and liquid rotenone, respectively.

**Concentration of Rotenone in Formulated Rotenone Product:** 7.0% and 5.0% active ingredient for powdered and liquid product, respectively.

**Concentration of Active Rotenone in Water:** 2.5ppm

**Water Conditions/Quality:** Beda Lake (Sampled on 09/15/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	19.5	10.5	8.7
1	19.5	10.6	8.7
2	19.2	9.9	8.7
3	18.8	9.6	8.7
4	18.6	9.3	8.7
5	18.5	9.0	8.7
6	18.4	2.5	8.7

**Detoxification of Rotenone Treated Water (If Required): Description of Detoxification Methods/Equipment; Potassium Permanganate Application Rate (Pounds Per Hour); Flow Rate of Stream/Outlet (cfs); Estimate of Average Concentration (ppm):** N/A

**Description of Lake Inlet(s)/Outlet(s) and Any Temporary Water Control Measures:** N/A

**Period of Toxicity:** One month

**Eradicated Fish Species:** Pumpkinseed Sunfish

**Results of Pre and Post Treatment Monitoring:** Prior to the treatment, Beda Lake was sampled for various water quality parameters including temperature, dissolved oxygen, pH, and zooplankton. Results from the pre-treatment water quality sampling are provided above. Post treatment sampling included VOC, semi-VOC, and N-methylpyrrolidone within 24 hours and two and a half months after the rehabilitation. VOC, semi-VOC, and N-methylpyrrolidone sampling according to the NDPES permit is suppose to occur 24 hours and one month post treatment. The one month sampling event was missed because it was the project manager's first year coordinating lake rehabilitations and he accidentally missed this step in the post rehabilitation protocol. However, once the error was discovered the project manager immediately collected water samples for VOC, semi-VOC, and N-methylpyrrolidone testing.

**Impact on Non-Target Organisms:** None observed

**Brief Description of Treatment/Detoxification and Other Comments:** Treatment began on September 15<sup>th</sup> and concluded on September 16<sup>th</sup>. Powdered rotenone was applied to the lake on the first day of treatment, whereas liquid rotenone was applied on the second day. A pumper

boat and helicopter were used to distribute powdered and liquid rotenone, respectively. Within a couple hours of treatment, stressed fish were observed along the shoreline and at the lake surface. On the morning of the 16<sup>th</sup>, several thousand pumpkinseed sunfish were observed dead along the shoreline and at the lake surface. Pumpkinseed sunfish ranged in size from 1- 6 inches in length. No dead trout were observed after the rehabilitation.

Beda Lake detoxified approximately one month later. Sentinel fish (n=6) held in a live trap were placed into the lake on October 15<sup>th</sup> and retrieved 60 hours later on October 18<sup>th</sup>. All fish held in the live trap survived.

**List of Lakes/Streams Proposed for Treatment Next Year: None**





### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

CLIENT CONTACT: Chad Jackson

CLIENT SAMPLE ID: B-1 thru B-6

ALS SAMPLE#: -01

DATE: 10/19/2010  
ALS JOB #: 1009136  
CLIENT PROJECT: Beda Lake  
DATE RECEIVED: 9/21/2010  
COLLECTION DATE: 9/17/2010 08:30  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	09/23/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	09/23/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	09/23/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1009136  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID B-1 thru B-6 DATE RECEIVED: 9/21/2010  
ALC SAMPLE#: -01 COLLECTION DATE: 9/17/2010 08:30  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	09/23/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Chlorethyl)Ether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1009136  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: B-1 thru B-6 DATE RECEIVED: 9/21/2010  
COLLECTION DATE: 9/17/2010 08:30  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	09/22/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-MethylNaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1-MethylNaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	09/22/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	09/22/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1009136

CLIENT CONTACT: Chad Jackson

CLIENT SAMPLE ID: B-1 thru B-6

COLLECTION DATE: 9/17/2010 08:30

ALS SAMPLE#: -01

WDOE ACCREDITATION: C601

CLIENT PROJECT: Beda Lake

DATE RECEIVED: 9/21/2010

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	09/22/2010	LAP
Phenanthrrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	6.7	2.0	1	UG/L	10/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	103	09/23/2010	GAP
Toluene-d8	EPA-8260	99.0	09/23/2010	GAP
4-Bromofluorobenzene	EPA-8260	101	09/23/2010	GAP
2-Fluorophenol	EPA-8270	45.2	09/22/2010	LAP
Phenol-d5	EPA-8270	24.0	09/22/2010	LAP



**(ALS) Environmental**

**CERTIFICATE OF ANALYSIS**

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1009136
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	Beda Lake
CLIENT SAMPLE ID	B-1 thru B-6	DATE RECEIVED:	9/21/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	9/17/2010 08:30
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	SW8270	78.6	09/22/2010	LAP
2-Fluorobiphenyl	EPA-8270	76.5	09/22/2010	LAP
2,4,6-Tribromophenol	EPA-8270	75.2	09/22/2010	LAP
Terphenyl-d14	SW8270	81.0	09/22/2010	LAP

U - Analyte analyzed for but not detected at level above reporting limit.





### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012055  
CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Beda Lake DATE RECEIVED: 12/7/2010  
COLLECTION DATE: 12/2/2010 11:00  
CLIENT SAMPLE ID B1-B5 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/08/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/08/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/08/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/08/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/08/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/08/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/08/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/08/2010	GAP

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ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

ALS Laboratory Group A Campbell Brothers Limited Company



**ALS environmental**

**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	<b>DATE:</b> 12/20/2010 <b>ALS JOB#:</b> 1012055 <b>ALS SAMPLE#:</b> -01
<b>CLIENT CONTACT:</b>	Chad Jackson	<b>DATE RECEIVED:</b> 12/7/2010
<b>CLIENT PROJECT:</b>	Beda Lake	<b>COLLECTION DATE:</b> 12/2/2010 11:00
<b>CLIENT SAMPLE ID</b>	B1-B5	<b>WDOE ACCREDITATION:</b> C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	ANALYSIS	
					DATE	BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/08/2010
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/08/2010
Styrene	EPA-8260	U	2.0	1	UG/L	12/08/2010
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/08/2010
Bromoform	EPA-8260	U	2.0	1	UG/L	12/08/2010
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/08/2010
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/08/2010
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/08/2010
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/08/2010
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/08/2010
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/08/2010
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/08/2010
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/08/2010
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/08/2010
Pyridine	EPA-8270	U	2.0	1	UG/L	12/10/2010
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010
Phenol	EPA-8270	U	2.0	1	UG/L	12/10/2010
Aniline	EPA-8270	U	2.0	1	UG/L	12/10/2010
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/10/2010
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/10/2010
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010

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### CERTIFICATE OF ANALYSIS

**CLIENT:** WA Dept of Fish and Wildlife  
 1550 Alder St NW  
 Ephrata, WA 98823      **DATE:** 12/20/2010  
**ALS JOB#:** 1012055  
**ALS SAMPLE#:** -01  
**CLIENT CONTACT:** Chad Jackson      **DATE RECEIVED:** 12/7/2010  
**CLIENT PROJECT:** Beda Lake      **COLLECTION DATE:** 12/2/2010 11:00  
**CLIENT SAMPLE ID** B1-B5      **WDOE ACCREDITATION:** C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/10/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/10/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/10/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012055  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Beda Lake

CLIENT SAMPLE ID: B1-B5

DATE RECEIVED: 12/7/2010

COLLECTION DATE: 12/2/2010 11:00

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/10/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	104	12/08/2010	GAP
Toluene-d8	EPA-8260	96.8	12/08/2010	GAP
4-Bromofluorobenzene	EPA-8260	106	12/08/2010	GAP
2-Fluorophenol	EPA-8270	42.9	12/10/2010	LAP
Phenol-d5	EPA-8270	37.7	12/10/2010	LAP
Nitrobenzene-d5	EPA-8270	76.5	12/10/2010	LAP
2-Fluorobiphenyl	EPA-8270	80.8	12/10/2010	LAP
2,4,6-Tribromophenol	EPA-8270	77.4	12/10/2010	LAP
Terphenyl-d14	EPA-8270	78.7	12/10/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
		ALS JOB#:	1012055
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Chad Jackson	DATE RECEIVED:	12/7/2010
CLIENT PROJECT:	Beda Lake	COLLECTION DATE:	12/2/2010 11:00
CLIENT SAMPLE ID	B1-B5	WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.



## **POST TREATMENT DISCHARGE MONITORING REPORT**

**Lake Name(s):** Harris, Sedge, Tern, and Dune (Desert Lake Chain)

**County:** Grant

**Township:** 18N, **Range:** 26 & 27E, & **Section(s):** 25, 31, and 36

**Purpose of Treatment:** Historically, the Desert Lake Chain were popular walk-in trout production waters located within the South Columbia Basin Wildlife Area in Grant County. Normally, these fisheries were maintained through annual fingerling trout plants. However, the entire Desert Lake Chain was infested with abundant stunted pumpkinseed sunfish. Pumpkinseed sunfish out compete fingerling trout for aquatic micro- and macro-invertebrates. As a result, the Desert Lake Chain has not been stocked with fingerling trout since 2003 because of poor survival.

In 2010, the WDFW Commission adopted a regulation proposal to change the Desert Lake Chain lakes from statewide general to selective gear rule and one trout daily bag limit. The objective of the regulation change was to create additional quality trout fishing opportunities similar to Beda Lake. In order to create quality trout waters at the Desert Lake Chain, pumpkinseed sunfish needed to be eradicated using rotenone. The Desert Lake Chain rehabilitation was the Region 2 Fish Program's number one priority in 2010.

**Name of Licensed Applicator(s):** Chad Jackson, Chris Donley, and Bob Jateff

### **Lake Description:**

1. Harris Lake: 39.0 surface acres, 353.0 acre feet, and 958,961,203 pounds of water
2. Sedge Lake: 9.0 surface acres, 85.0 acre feet, and 231,042,240 pounds of water
3. Tern Lake: 8.0 surface acres, 70.0 acre feet, and 190,270,080 pounds of water
4. Dune Lake: 8.0 surface acres, 70.0 acre feet, and 190,270,080 pounds of water

### **Mean Depth:**

1. Harris Lake: 9.1 feet
2. Sedge Lake: 9.4 feet
3. Tern Lake: 8.8 feet
4. Dune Lake: 8.8 feet

**Stream Description:** Width: N/A Length: N/A

**Flow Rate of Stream/Outlet (cfs):** N/A

**Name of Fish Toxicant Product Used:** CFT Legumine Liquid Rotenone

**Description of Treatment Method:** Due to access conditions, powdered rotenone lake rehabilitation equipment could not be used to treat the Desert Lake Chain. Instead, a helicopter with tank and boom sprayers was used to distribute liquid rotenone at each lake.

**Quantity of Fish Toxicant Used:**

1. Harris Lake: 233 gallons
2. Sedge Lake: 56 gallons
3. Tern Lake: 46 gallons
4. Dune Lake: 46 gallons
5. Total: 381 gallons

**Concentration of Rotenone in Formulated Rotenone Product:** 5.0% active ingredient in liquid rotenone

**Concentration of Active Rotenone in Water:** 2.5ppm

**Water Conditions/Quality:** Harris Lake (Sampled on 09/15/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	19.6	10.2	9.1
1	19.3	10.2	9.1
2	18.7	9.8	9.1
3	18.5	9.1	9.1
4	18.1	9.0	9.1
5	17.9	6.9	9.1
6	17.7	7.0	9.1

**Water Conditions/Quality:** Sedge and Tern Lakes (Sampled on 09/15/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	20.9	10.3	9.5
1	20.2	10.4	9.5
2	19.7	10.8	9.5
3	19.0	10.7	9.5
4	18.6	10.7	9.5

**Water Conditions/Quality:** Dune Lake (Sampled on 09/15/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	21.0	10.5	9.5
1	19.7	10.6	9.5
2	19.6	10.7	9.5

3	19.1	10.0	9.5
4	17.7	7.2	9.5
5	16.6	6.7	9.5

**Detoxification of Rotenone Treated Water (If Required): Description of Detoxification Methods/Equipment; Potassium Permanganate Application Rate (Pounds Per Hour); Flow Rate of Stream/Outlet (cfs); Estimate of Average Concentration (ppm): N/A**

**Description of Lake Inlet(s)/Outlet(s) and Any Temporary Water Control Measures:** N/A

**Period of Toxicity:** One month

**Eradicated Fish Species:** Pumpkinseed Sunfish

**Results of Pre and Post Treatment Monitoring:** Prior to treatment, the Desert Lake Chain was sampled for water quality parameters including temperature, dissolved oxygen, pH, and zooplankton. Results from the pre-treatment water quality sampling are provided above. Post treatment sampling included VOC, semi-VOC, and N-methylpyrrolidone within 24 hours and two and a half months after the rehabilitation. VOC, semi-VOC, and N-methylpyrrolidone sampling according to the NDPES permit is suppose to occur 24 hours and one month post treatment. The one month sampling event was missed because it was the project manager's first year coordinating lake rehabilitations and he accidentally missed this step in the post rehabilitation protocol. However, once the error was discovered the project manager immediately collected water samples for VOC, semi-VOC, and N-methylpyrrolidone testing.

**Impact on Non-Target Organisms:** None observed

**Brief Description of Treatment/Detoxification and Other Comments:** Treatment of the Desert Lake Chain began and ended on September 16<sup>th</sup>. Only liquid rotenone was used during treatment. A helicopter equipped with a tank and boom sprayers was used to treat each lake. Within 3-4 hours, stressed fish were observed along the shoreline and at the lake surface. On the following day, several thousand pumpkinseed sunfish were observed dead along the shoreline and at the lake surface. Pumpkinseed sunfish ranged in size from 1-6 inches in length. This treatment took approximately 4 hours to complete.

The Desert Lake Chain detoxified approximately one month later. Sentinel fish (n=6) held in a live trap were placed into each lake on October 15<sup>th</sup> and retrieved 60 hours later on October 8<sup>th</sup>. All fish held in live traps survived.

**List of Lakes/Streams Proposed for Treatment Next Year:** None





### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1009138  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: H-1 thru H-6 DATE RECEIVED: 9/21/2010  
COLLECTION DATE: 9/17/2010 09:30  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	09/23/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	09/23/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	09/23/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1009138  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID H-1 thru H-6 DATE RECEIVED: 9/21/2010  
ALS SAMPLE#: -01 COLLECTION DATE: 9/17/2010 09:30  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	09/23/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1009138

CLIENT CONTACT: Chad Jackson

CLIENT SAMPLE ID: H-1 thru H-6

ALB SAMPLE#: -01

CLIENT PROJECT: Harris Lake

DATE RECEIVED: 9/21/2010

COLLECTION DATE: 9/17/2010 09:30

WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	09/22/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	09/22/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	09/22/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP



**CERTIFICATE OF ANALYSIS**

**CLIENT:** WA Dept of Fish and Wildlife  
 1550 Alder St NW  
 Ephrata, WA 98823 **DATE:** 10/19/2010  
**ALS JOB#:** 1009138  
**CLIENT CONTACT:** Chad Jackson **CLIENT PROJECT:** Harris Lake  
**CLIENT SAMPLE ID:** H-1 thru H-6 **DATE RECEIVED:** 9/21/2010  
**ALS SAMPLE#:** -01 **COLLECTION DATE:** 9/17/2010 09:30  
**WDOE ACCREDITATION:** C601

**DATA RESULTS**

<b>ANALYTE</b>	<b>METHOD</b>	<b>RESULTS</b>	<b>REPORTING</b>	<b>DILUTION</b>	<b>UNITS</b>	<b>ANALYSIS</b>	<b>ANALYSIS</b>
			<b>LIMITS</b>			<b>DATE</b>	<b>BY</b>
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	09/22/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	53	2.0	1	UG/L	10/15/2010	ALSL

<b>SURROGATE</b>	<b>METHOD</b>	<b>%REC</b>	<b>ANALYSIS</b>	<b>ANALYSIS</b>
			<b>DATE</b>	<b>BY</b>
1,2-Dichloroethane-d4	EPA-8260	103	09/23/2010	GAP
Toluene-d8	EPA-8260	99.1	09/23/2010	GAP
4-Bromofluorobenzene	EPA-8260	100	09/23/2010	GAP
2-Fluorophenol	EPA-8270	46.4	09/22/2010	LAP
Phenol-d5	EPA-8270	25.7	09/22/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1009138

CLIENT CONTACT: Chad Jackson

CLIENT SAMPLE ID: H-1 thru H-6

COLLECTION DATE: 9/17/2010 09:30

ALS SAMPLE#: -01

WDOE ACCREDITATION: C601

CLIENT PROJECT: Harris Lake

DATE RECEIVED: 9/21/2010

### DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	SW8270	94.4	09/22/2010	LAP
2-Fluorobiphenyl	EPA-8270	77.2	09/22/2010	LAP
2,4,6-Tribromophenol	EPA-8270	77.7	09/22/2010	LAP
Terphenyl-d14	SW8270	87.5	09/22/2010	LAP

U - Analyte analyzed for but not detected at level above reporting limit.







### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823  
DATE: 12/20/2010  
ALS JOB#: 1012063  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Harris Lake  
DATE RECEIVED: 12/9/2010  
CLIENT SAMPLE ID: H1-H5  
COLLECTION DATE: 12/8/2010 09:40  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/09/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP

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**CERTIFICATE OF ANALYSIS**

**CLIENT:** WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 **DATE:** 12/20/2010  
**ALS JOB#:** 1012063  
**CLIENT CONTACT:** Chad Jackson **ALS SAMPLE#:** -01  
**CLIENT PROJECT:** Harris Lake **DATE RECEIVED:** 12/9/2010  
**CLIENT SAMPLE ID:** H1-H5 **COLLECTION DATE:** 12/8/2010 09:40  
**WDOE ACCREDITATION:** C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/10/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dibenzo[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	97.2	12/09/2010	GAP
Toluene-d8	EPA-8260	93.6	12/09/2010	GAP
4-Bromofluorobenzene	EPA-8260	108	12/09/2010	GAP
2-Fluorophenol	EPA-8270	45.6	12/10/2010	LAP
Phenol-d5	EPA-8270	42.0	12/10/2010	LAP
Nitrobenzene-d5	EPA-8270	81.6	12/10/2010	LAP
2-Fluorobiphenyl	EPA-8270	84.4	12/10/2010	LAP
2,4,6-Tribromophenol	EPA-8270	83.7	12/10/2010	LAP
Terphenyl-d14	EPA-8270	88.3	12/10/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1012063
CLIENT PROJECT:	Harris Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	H1-H5	DATE RECEIVED:	12/9/2010
		COLLECTION DATE:	12/8/2010 09:40
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.





## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1009135  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID S-1 thru S-6 DATE RECEIVED: 9/21/2010  
COLLECTION DATE: 9/17/2010 09:30  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	09/23/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	09/23/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	09/23/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP

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**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1009135  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: S-1 thru S-6 DATE RECEIVED: 9/21/2010  
COLLECTION DATE: 9/17/2010 09:30  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	09/23/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1009135

CLIENT CONTACT: Chad Jackson

CLIENT SAMPLE ID: S-1 thru S-6

DATE RECEIVED: 9/21/2010

COLLECTION DATE: 9/17/2010 09:30

ALS SAMPLE#: -01

WDOE ACCREDITATION: C601

Sedge Lake

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	09/22/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	09/22/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	09/22/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP



### CERTIFICATE OF ANALYSIS

**CLIENT:** WA Dept of Fish and Wildlife  
 1550 Alder St NW  
 Ephrata, WA 98823      **DATE:** 10/19/2010  
**CLIENT CONTACT:** Chad Jackson      **ALS JOB#:** 1009135  
**CLIENT SAMPLE ID:** S-1 thru S-6      **CLIENT PROJECT:** Sedge Lake  
**ALS SAMPLE#:** -01      **DATE RECEIVED:** 9/21/2010  
**WDOE ACCREDITATION:** 9/17/2010 09:30  
**C601**

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	09/22/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	60	2.0	1	UG/L	10/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	104	09/23/2010	GAP
Toluene-d8	EPA-8260	98.4	09/23/2010	GAP
4-Bromofluorobenzene	EPA-8260	101	09/23/2010	GAP
2-Fluorophenol	EPA-8270	46.6	09/22/2010	LAP
Phenol-d5	EPA-8270	25.3	09/22/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1009135

CLIENT CONTACT: Chad Jackson

CLIENT SAMPLE ID: S-1 thru S-6

DATE RECEIVED: 9/21/2010

ALB SAMPLE#: -01

COLLECTION DATE: 9/17/2010 09:30

WDOE ACCREDITATION: C601

Sedge Lake

### DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	SW8270	91.0	09/22/2010	LAP
2-Fluorobiphenyl	EPA-8270	66.6	09/22/2010	LAP
2,4,6-Tribromophenol	EPA-8270	75.2	09/22/2010	LAP
Terphenyl-d14	SW8270	80.2	09/22/2010	LAP

U - Analyte analyzed for but not detected at level above reporting limit.



**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012064  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Sedge Lake  
CLIENT SAMPLE ID: S1-S5

DATE RECEIVED: 12/9/2010  
COLLECTION DATE: 12/8/2010 09:45  
WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/09/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/09/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/09/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012064  
CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Sedge Lake DATE RECEIVED: 12/9/2010  
CLIENT SAMPLE ID: S1-S5 COLLECTION DATE: 12/8/2010 09:45  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/09/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP

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ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

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**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012064  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/9/2010  
CLIENT PROJECT: Sedge Lake COLLECTION DATE: 12/8/2010 09:45  
CLIENT SAMPLE ID: S1-S5 WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/10/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4,6-Trichlorophénol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/10/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/10/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012064  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Sedge Lake

CLIENT SAMPLE ID: S1-S5

DATE RECEIVED: 12/9/2010  
COLLECTION DATE: 12/8/2010 09:45

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/10/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	0.093	0.050	1	UG/L	12/15/2010	ASL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	97.3	12/09/2010	GAP
Toluene-d8	EPA-8260	95.1	12/09/2010	GAP
4-Bromofluorobenzene	EPA-8260	100	12/09/2010	GAP
2-Fluorophenol	EPA-8270	45.1	12/10/2010	LAP
Phenol-d5	EPA-8270	40.0	12/10/2010	LAP
Nitrobenzene-d5	EPA-8270	79.8	12/10/2010	LAP
2-Fluorobiphenyl	EPA-8270	78.6	12/10/2010	LAP
2,4,6-Tribromophenol	EPA-8270	80.0	12/10/2010	LAP
Terphenyl-d14	EPA-8270	83.8	12/10/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
		ALS JOB#:	1012064
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Chad Jackson	DATE RECEIVED:	12/9/2010
CLIENT PROJECT:	Sedge Lake	COLLECTION DATE:	12/8/2010 09:45
CLIENT SAMPLE ID	S1-S5	WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.





### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1009134  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID T-1 thru T-6 DATE RECEIVED: 9/21/2010  
COLLECTION DATE: 9/17/2010 09:45  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	09/22/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Trichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	09/22/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	09/22/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	09/22/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	09/22/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	09/22/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	09/22/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP

Page 1

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

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### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1009134  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: T-1 thru T-6 CLIENT PROJECT: Tern Lake  
DATE RECEIVED: 9/21/2010  
COLLECTION DATE: 9/17/2010 09:45  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	09/22/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	09/22/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/22/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1009134  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: T-1 thru T-6 CLIENT PROJECT: Tern Lake  
DATE RECEIVED: 9/21/2010  
ALS SAMPLE#: -01 COLLECTION DATE: 9/17/2010 09:45  
WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	09/22/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	09/22/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	09/22/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1009134  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID T-1 thru T-6 DATE RECEIVED: 9/21/2010  
COLLECTION DATE: 9/17/2010 09:45  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	09/22/2010	LAP
Phenanthrrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	120	2.0	1	UG/L	10/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	103	09/22/2010	GAP
Toluene-d8	EPA-8260	99.0	09/22/2010	GAP
4-Bromofluorobenzene	EPA-8260	101	09/22/2010	GAP
2-Fluorophenol	EPA-8270	47.7	09/22/2010	LAP
Phenol-d5	EPA-8270	26.3	09/22/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1009134
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	Tern Lake
CLIENT SAMPLE ID	T-1 thru T-6	DATE RECEIVED:	9/21/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	9/17/2010 09:45
		WDOE ACCREDITATION:	C601

### DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	SW8270	90.5	09/22/2010	LAP
2-Fluorobiphenyl	EPA-8270	73.4	09/22/2010	LAP
2,4,6-Tribromophenol	EPA-8270	79.8	09/22/2010	LAP
Terphenyl-d14	SW8270	85.2	09/22/2010	LAP

U - Analyte analyzed for but not detected at level above reporting limit.





### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012062  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Tern Lake

CLIENT SAMPLE ID: T1-T5

DATE RECEIVED: 12/9/2010  
COLLECTION DATE: 12/8/2010 09:50  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/09/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/09/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/09/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012062  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Tern Lake

CLIENT SAMPLE ID: T1-T5

DATE RECEIVED: 12/9/2010  
COLLECTION DATE: 12/8/2010 09:50

WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/09/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012062  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Tern Lake

CLIENT SAMPLE ID: T1-T5

DATE RECEIVED: 12/9/2010  
COLLECTION DATE: 12/8/2010 09:50

WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/10/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/10/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/10/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012062  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Tern Lake DATE RECEIVED: 12/9/2010  
COLLECTION DATE: 12/8/2010 09:50  
CLIENT SAMPLE ID T1-T5 WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/10/2010	LAP
Phenanthren	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/15/2010	ASL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	101	12/09/2010	GAP
Toluene-d8	EPA-8260	100	12/09/2010	GAP
4-Bromofluorobenzene	EPA-8260	107	12/09/2010	GAP
2-Fluorophenol	EPA-8270	43.4	12/10/2010	LAP
Phenol-d5	EPA-8270	38.6	12/10/2010	LAP
Nitrobenzene-d5	EPA-8270	75.7	12/10/2010	LAP
2-Fluorobiphenyl	EPA-8270	82.1	12/10/2010	LAP
2,4,6-Tribromophenol	EPA-8270	82.6	12/10/2010	LAP
Terphenyl-d14	EPA-8270	86.2	12/10/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
		ALS JOB#:	1012062
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Chad Jackson	DATE RECEIVED:	12/9/2010
CLIENT PROJECT:	Tern Lake	COLLECTION DATE:	12/8/2010 09:50
CLIENT SAMPLE ID	T1-T5	WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.





## CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1009137
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	Dune Lake
CLIENT SAMPLE ID	D-1 thru D-6	DATE RECEIVED:	9/21/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	9/17/2010 09:45
		WDOE ACCREDITATION:	C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	09/23/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	09/23/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	09/23/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP

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ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

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ALS Environmental

## CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1009137
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	Dune Lake
CLIENT SAMPLE ID	D-1 thru D-6	DATE RECEIVED:	9/21/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	9/17/2010 09:45
		WDOE ACCREDITATION:	C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	09/23/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	09/23/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	09/23/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP



### CERTIFICATE OF ANALYSIS

**CLIENT:** WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823      **DATE:** 10/19/2010  
**CLIENT CONTACT:** Chad Jackson      **ALS JOB#:** 1009137  
**CLIENT SAMPLE ID:** D-1 thru D-6      **CLIENT PROJECT:** Dune Lake  
**ALS SAMPLE#:** -01      **DATE RECEIVED:** 9/21/2010  
COLLECTION DATE: 9/17/2010 09:45  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	09/22/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	09/22/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	09/22/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1009137
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	Dune Lake
CLIENT SAMPLE ID	D-1 thru D-6	DATE RECEIVED:	9/21/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	9/17/2010 09:45
		WDOE ACCREDITATION:	C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	09/22/2010	LAP
Phenanthrrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	09/22/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	81	2.0	1	UG/L	10/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	103	09/23/2010	GAP
Toluene-d8	EPA-8260	98.9	09/23/2010	GAP
4-Bromofluorobenzene	EPA-8260	101	09/23/2010	GAP
2-Fluorophenol	EPA-8270	46.0	09/22/2010	LAP
Phenol-d5	EPA-8270	27.4	09/22/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1009137

CLIENT CONTACT: Chad Jackson

CLIENT SAMPLE ID: D-1 thru D-6

DATE RECEIVED: 9/21/2010

COLLECTION DATE: 9/17/2010 09:45

ALS SAMPLE#: -01

WDOE ACCREDITATION: C601

### DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	SW8270	94.1	09/22/2010	LAP
2-Fluorobiphenyl	EPA-8270	78.2	09/22/2010	LAP
2,4,6-Tribromophenol	EPA-8270	77.9	09/22/2010	LAP
Terphenyl-d14	SW8270	82.5	09/22/2010	LAP

U - Analyte analyzed for but not detected at level above reporting limit.





## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012065  
CLIENT CONTACT: Chad Jackson ALS SAMPLE#: -01  
CLIENT PROJECT: Dune Lake DATE RECEIVED: 12/9/2010  
CLIENT SAMPLE ID: D1-D5 COLLECTION DATE: 12/8/2010 09:55  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/09/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/09/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/09/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012065  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Dune Lake

CLIENT SAMPLE ID: D1-D5

DATE RECEIVED: 12/9/2010  
COLLECTION DATE: 12/8/2010 09:55  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/09/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/09/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/09/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012065  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Dune Lake  
CLIENT SAMPLE ID: D1-D5

DATE RECEIVED: 12/9/2010  
COLLECTION DATE: 12/8/2010 09:55  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/10/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/10/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/10/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Dune Lake

CLIENT SAMPLE ID: D1-D5

DATE: 12/20/2010  
ALS JOB#: 1012065  
ALS SAMPLE#: -01  
DATE RECEIVED: 12/9/2010  
COLLECTION DATE: 12/8/2010 09:55  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/10/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benz[a]Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[b]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[k]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[a]Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Dibenzo[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/10/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/15/2010	ASL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	103	12/09/2010	GAP
Toluene-d8	EPA-8260	94.5	12/09/2010	GAP
4-Bromofluorobenzene	EPA-8260	100	12/09/2010	GAP
2-Fluorophenol	EPA-8270	45.5	12/10/2010	LAP
Phenol-d5	EPA-8270	40.7	12/10/2010	LAP
Nitrobenzene-d5	EPA-8270	85.1	12/10/2010	LAP
2-Fluorobiphenyl	EPA-8270	81.7	12/10/2010	LAP
2,4,6-Tribromophenol	EPA-8270	83.5	12/10/2010	LAP
Terphenyl-d14	EPA-8270	84.2	12/10/2010	LAP



**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
		ALS JOB#:	1012065
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Chad Jackson	DATE RECEIVED:	12/9/2010
CLIENT PROJECT:	Dune Lake	COLLECTION DATE:	12/8/2010 09:55
CLIENT SAMPLE ID	D1-D5	WDOE ACCREDITATION:	C601

**DATA RESULTS**

U - Analyte analyzed for but not detected at level above reporting limit.





### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012033  
WDOE ACCREDITATION: C601

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Windmill Lake

### LABORATORY BLANK RESULTS

#### MB-120110W

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/01/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/01/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/01/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/01/2010	GAP



**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1012033
CLIENT PROJECT:	Windmill Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	W1 - W5	DATE RECEIVED:	12/3/2010
		COLLECTION DATE:	12/1/2010 11:15
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

U - Analyte analyzed for but not detected at level above reporting limit.



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012033  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/3/2010  
CLIENT PROJECT: Windmill Lake COLLECTION DATE: 12/1/2010 11:15  
CLIENT SAMPLE ID: W1 - W5 WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/07/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/16/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	101	12/03/2010	GAP
Toluene-d8	EPA-8260	96.7	12/03/2010	GAP
4-Bromofluorobenzene	EPA-8260	104	12/03/2010	GAP
2-Fluorophenol	EPA-8270	43.6	12/07/2010	LAP
Phenol-d5	EPA-8270	41.3	12/07/2010	LAP
Nitrobenzene-d5	EPA-8270	91.7	12/07/2010	LAP
2-Fluorobiphenyl	EPA-8270	88.5	12/07/2010	LAP
2,4,6-Tribromophenol	EPA-8270	75.6	12/07/2010	LAP
Terphenyl-d14	EPA-8270	92.9	12/07/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012033  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Windmill Lake

CLIENT SAMPLE ID: W1 - W5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 11:15

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/07/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/07/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/07/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012033  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Windmill Lake  
CLIENT SAMPLE ID: W1 - W5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 11:15  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012033  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Windmill Lake

CLIENT SAMPLE ID: W1 - W5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 11:15  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1010052

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Windmill Lake

WDOE ACCREDITATION: C601

### LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 1143

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	ANALYSIS DATE	ANALYSIS BY
1,1-Dichloroethene - BS	EPA-8260	107			10/08/2010	GAP
1,1-Dichloroethene - BSD	EPA-8260	91.0	15		10/08/2010	GAP
Benzene - BS	EPA-8260	109			10/08/2010	GAP
Benzene - BSD	EPA-8260	94.1	14		10/08/2010	GAP
Trichloroethene - BS	EPA-8260	106			10/08/2010	GAP
Trichloroethene - BSD	EPA-8260	90.6	15		10/08/2010	GAP
Toluene - BS	EPA-8260	97.8			10/08/2010	GAP
Toluene - BSD	EPA-8260	109	11		10/08/2010	GAP
Chlorobenzene - BS	EPA-8260	86.4			10/08/2010	GAP
Chlorobenzene - BSD	EPA-8260	98.2	12		10/08/2010	GAP

APPROVED BY:

A handwritten signature in black ink, appearing to read "Bob Bagam".

Laboratory Director



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1010052

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Windmill Lake

WDOE ACCREDITATION: C601

### LABORATORY BLANK RESULTS

#### MB-100810W

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	BY
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/08/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1010052
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	Windmill Lake
CLIENT SAMPLE ID	W1-W5	DATE RECEIVED:	10/8/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	10/7/2010 13:30
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.



**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

**CLIENT:** WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823      **DATE:** 10/19/2010  
**ALS JOB#:** 1010052  
**CLIENT CONTACT:** Chad Jackson      **CLIENT PROJECT:** Windmill Lake  
**WDOE ACCREDITATION:** C601

**LABORATORY/BLANK RESULTS**

**MB-100810W**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/08/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/08/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/08/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	10/08/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1010052  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: W1-W5 CLIENT PROJECT: Windmill Lake  
DATE RECEIVED: 10/8/2010  
ALS SAMPLE#: -01 COLLECTION DATE: 10/7/2010 13:30  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/08/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	1.0	1	UG/L	10/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	101	10/08/2010	GAP
Toluene-d8	EPA-8260	92.8	10/08/2010	GAP
4-Bromofluorobenzene	EPA-8260	103	10/08/2010	GAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1010052  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: W1-W5 CLIENT PROJECT: Windmill Lake  
ALS SAMPLE#: -01 DATE RECEIVED: 10/8/2010  
COLLECTION DATE: 10/7/2010 13:30  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/08/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/08/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/08/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP

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ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

ALS Laboratory Group A Campbell Brothers Limited Company



Pumper boats and an airboat were used to apply powdered and liquid rotenone, respectively, to the entire Windmill-Canal Lake Chain. Within two to three hours of each treatment, stressed fish were observed along the shorelines and lake surfaces. Several thousand dead fish were observed along the shorelines and lake surfaces post treatments. Species observed in no particular order included common carp, yellow perch, bluegill, pumpkinseed sunfish, largemouth bass, rainbow trout, and black crappie. Fish size ranged from 1 to 30+ inches in length, however, most species ranged from 1 to 20 inches. The largest species observed were common carp in North and South Teal Lakes where the largest specimens were 15-20+ pounds.

The exact date the Windmill-Canal Lake Chain detoxified is unknown. Following the rehabilitation, the entire chain completely froze over the week of November 22<sup>nd</sup>, 2010 and remained frozen until late-February 2011. Staff was unable to place live traps with sentinel fish into any of the lakes post treatment. It's assumed that the Windmill-Canal Lake Chain detoxified within a couple months post treatment.

**List of Lakes/Streams Proposed for Treatment Next Year:** None

beaver dams that are rich with organic materials. Waters rich with organic materials quickly detoxified rotenone.

**Period of Toxicity:** Unknown. The entire Windmill-Canal Lake Chain completely froze over during the week of November 22<sup>nd</sup>, 2010 and remained frozen until late-February 2011. Staff was unable to place live traps with sentinel fish into any of these lakes. Fished stocked post ice out survived well indicating that some time during ice over the lakes detoxified.

**Eradicated Fish Species:** common carp, yellow perch, bluegill, pumpkinseed sunfish, largemouth bass, black crappie and rainbow trout

**Results of Pre and Post Treatment Monitoring:** Prior to treatment, the Windmill-Canal Lake Chain was sampled for various water quality parameters including temperature, dissolved oxygen, pH, and zooplankton. Results from the pre-treatment water quality sampling are provided above. Post treatment sampling for June, North-North Windmill, North Windmill, Windmill, Canal, and Pit Lakes included VOC, semi-VOC, and N-methylpyrrolidone within 24 hours and two months after the rehabilitation. Post treatment sampling for North and South Teal Lakes was performed within 24 hours and one month after the rehabilitation. Post treatment sampling for VOC, semi-VOC, and N-methylpyrrolidone did not occur at Herman and Lyle Lakes because no liquid rotenone was applied to these waters during the Windmill-Canal Lake Chain rehabilitations. As stipulated in WDFW's NPDES permit, only waters treated with liquid rotenone require VOC, semi-VOC, and N-methylpyrrolidone sampling post treatment.

Post treatment sampling for VOC, semi-VOC, and N-methylpyrrolidone is supposed to occur within 24 hours and one month after the rehabilitation according to WDFW's NPDES permit. The one month sampling event at June, North-North Windmill, North Windmill, Windmill, Canal, and Pit Lakes was missed because it was the project manager's first year coordinating lake rehabilitations and he accidentally missed this step in the post rehabilitation protocol. However, once the error was discovered the project manager immediately collected water samples for VOC, semi-VOC, and N-methylpyrrolidone testing.

**Impact on Non-Target Organisms:** None observed

**Brief Description of Treatment/Detoxification and Other Comments:** The Windmill-Canal Lake Chain rehabilitations began on October 4<sup>th</sup> and concluded on October 15<sup>th</sup>. The June through Pit portion of the chain were rehabilitated first during the week of October 4<sup>th</sup>, beginning with Windmill and Canal Lakes and moving to the up and downstream lakes from there. The North and South Teal Lakes rehabilitations began and concluded on October 12<sup>th</sup>. Sentinel fish monitoring in the Herman and Lyle Lakes outlets continued until October 22<sup>nd</sup>.

and Lyle Lake outlet live traps either. However, one the next day (October 13<sup>th</sup>) four of the six sentinel fish in the Herman Lake outlet live trap were dead. No stressed and/or dead fish were observed along the shorelines and lake surfaces of Herman and Lyle Lakes. No sentinel fish mortality was observed in the Lyle Lake outlet live trap. Since no mortality was observed in the Lyle Lake or the outlet live trap, six more fish were placed into the Herman Lake outlet live trap and monitoring increased to twice daily. Potential sources of mortality of the Herman Lake outlet sentinel fish include rotenone from the upstream rehabilitations or post release mortality (i.e., swimming exhaustion, temperature shock, stress, etc). Most likely a pulse of treated water flowed through the South Teal Lake outlet, Herman Lake, and killed the sentinel fish before diluting/detoxifying in Lyle Lake. The reason no stressed and/or dead fish were observed in Herman Lake is because they likely detected the treated water and sought areas of refuge. On October 15<sup>th</sup>, two of the six sentinel fish in the Herman Lake outlet live trap died. No stressed and/or dead fish were observed along the shorelines and lake surfaces of Herman and Lyle Lakes. No sentinel fish mortality was observed in the Lyle Lake outlet live trap. The source of the mortality of these sentinel fish is believed to be related to post release stress because only two fish died and remaining fish were still very lively. Replacement sentinel fish were again placed in the Herman Lake outlet live trap and monitoring continued. From October 15<sup>th</sup> through October 22<sup>nd</sup>, no stressed and/or dead fish were observed along the shorelines or lake surfaces of Herman or Lyle Lakes. No sentinel fish mortality was observed in the Herman and Lyle Lake outlet live traps either. The original six sentinel fish placed in the Lyle Lake outlet live trap persisted for 11 days and were lively upon release.

Based on the sentinel fish results and lake observations during and after the Windmill-Canal Lake Chain rehabilitations, the designated dilution/detoxification basins prevented treated water from leaving Lyle Lake. Some treated water appeared to have drained into Herman Lake based on sentinel fish results. However, the concentration of rotenone is believed to be very low since no stressed and/or dead fish were observed in Herman Lake for 11 days.

**Description of Lake Inlet(s)/Outlet(s) and Any Temporary Water Control Measures:**

Please view attached map of Windmill-Canal Lake Chain for reference. At the head of the Windmill-Canal Lake Chain is June Lake which is fed by a groundwater spring. The outlet of June Lake drains into North-North Windmill Lake. North-North Windmill Lake is also fed by a small ground water stream. From North-North Windmill Lake, the lake order is North Windmill, Windmill, Canal, Pit, North Teal, South Teal, Herman, and Lyle. Each lake in the chain is connected by surface water inlets and outlets of varying sizes. Surface water draining Lyle Lake flows southerly into Thread Lake, then underneath McManamon Road, into Owl Lake and its surrounding wetlands, and ultimately becomes groundwater. An area of significance within this chain is the outlet stream draining South Teal Lake. This outlet is ½-¾ of a mile in length and resembles a swamp/wetland complex more than a typical channelized and free flowing outlet stream. Furthermore, this outlet stream contains several shallow backwater areas created by

**Water Conditions/Quality: Lyle Lake (Sampled on 10/12/10)**

Depth (m)	Temp °C	DO (ppm)	pH
Surface	14.7	8.2	9.1
1	14.3	8.4	9.2
2	13.9	8.5	9.2
3	13.5	8.0	9.2
4	13.2	7.4	9.1

**Detoxification of Rotenone Treated Water (If Required): Description of Detoxification Methods/Equipment; Potassium Permanganate Application Rate (Pounds Per Hour); Flow Rate of Stream/Outlet (cfs); Estimate of Average Concentration (ppm):** Only the lakes and connecting inlets/outlets from June to South Teal Lakes were physically treated with powdered and liquid rotenone. The outlet stream draining South Teal Lake, Herman Lake, and Lyle Lake were used as dilution/detoxification basins for treated water originating from the rest of the chain. The outlet stream draining South Teal Lake resembles a swamp/wetland complex rich with organic materials more than a typical channelized and free flowing outlet stream. A detailed description of the South Teal Lake outlet is provided below. Herman Lake is 34.7 surface acres and contains 460.3 acre feet of water. Lyle Lake is 22.0 surface acres and contains 44.9 acre feet of water. The connector stream between the two lakes is relatively shallow, rich with organic materials, and nearly covered with emergent vegetation. Combined, these two lakes would require 2,454 pounds of powdered rotenone (7.0% active ingredient) to achieve a concentration of 2.5ppm. Between natural degradation of rotenone in the treated lakes and the designated dilution/detoxification basins, the project manager was confident that no treated water would leave Lyle Lake and enter any connected downstream waters. However, as a precaution the flow of treated water moving through the dilution/detoxification basins was monitored using sentinel fish (n=6 fish each) placed into the outlet streams of Herman and Lyle Lakes. Sentinel fish were monitored every couple hours during the North and South Teal Lakes rehabilitations and post treatment daily until October 22<sup>nd</sup>. Additionally, the shorelines and lake surfaces of both lakes were walked pre and post treatment by staff to look for stressed and/or dead fish. Stressed and/or dead fish in Herman Lake was considered permissible provided mortality appeared low and was contained to only this water. If sentinel fish mortality was observed in the Herman Lake outlet live trap, shoreline surveys and monitoring of sentinel fish in the Lyle Lake outlet live trap was increased to determine if treated water was present in and/or leaving Lyle Lake. If sentinel fish mortality was observed in the Lyle Lake outlet live trap, the backup plan was to install a potassium permanganate drip station immediately in the outlet stream to detoxify treated water. The drip station would be operational until sentinel fish placed in the outlet stream survived for 48 hours.

During the North and South Teal Lake rehabilitations (October 12<sup>th</sup>), no stressed and/or dead fish were observed in Herman and Lyle Lake. No sentinel fish mortality was observed in the Herman

**Water Conditions/Quality: Pit Lake (Sampled on 10/03/10)**

Depth (m)	Temp °C	DO (ppm)	pH
Surface	18.7	8.9	9.6
1	18.7	8.9	9.7
2	18.7	8.9	9.7

**Water Conditions/Quality: North Teal Lake (Sampled on 10/12/10)**

Depth (m)	Temp °C	DO (ppm)	pH
Surface	15.5	7.9	9.6
1	15.7	7.6	9.7
2	15.7	7.6	9.7
3	15.8	7.6	9.7
4	15.8	7.6	9.7
5	15.8	7.6	9.7
6	15.8	7.4	9.7
7	15.6	6.2	9.6
8	14.9	2.8	9.3
9	14.1	2.4	9.1
10	12.6	0.3	8.8

**Water Conditions/Quality: South Teal Lake (Sampled on 10/12/10)**

Depth (m)	Temp °C	DO (ppm)	pH
Surface	15.7	7.8	9.7
1	15.7	7.7	9.7
2	15.7	7.6	9.7
3	15.7	7.5	9.7
4	15.7	7.5	9.7
5	15.7	7.5	9.7
6	15.7	7.2	9.7
7	15.6	7.1	9.7
8	15.6	7.3	9.7
9	15.5	6.8	9.7

**Water Conditions/Quality: Herman Lake (Sampled on 10/12/10)**

Depth (m)	Temp °C	DO (ppm)	pH
Surface	15.2	7.5	9.3
1	15.2	7.4	9.3
2	15.1	7.3	9.3
3	15.1	7.0	9.2
4	15.0	7.0	9.3
5	15.0	6.3	9.2
6	14.8	6.0	9.2
7	14.6	4.0	9.1

5	14.4	0.3	8.9
6	13.2	0.2	8.8
6.5 (bottom)	12.5	0.2	8.8

**Water Conditions/Quality:** North Windmill Lake (Sampled on 10/06/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	17.0	9.5	10.3
1	17.0	9.8	10.3
2	17.0	9.8	10.3
3	16.9	9.6	10.3
4	16.9	9.6	10.3
5	16.7	8.9	10.3
6	16.8	8.4	10.3
7	16.6	6.9	10.2
8	16.2	2.0	10.1

**Water Conditions/Quality:** Windmill Lake (Sampled on 10/03/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	18.2	14.6	10.3
1	18.0	14.6	10.3
2	17.8	13.5	10.2
3	17.7	12.8	10.2
4	17.2	9.1	10.1
5	16.4	3.6	9.8
6	15.3	0.6	9.4
7	14.2	0.3	9.4
8	14.0	0.2	9.3
9	13.7	0.2	9.3

**Water Conditions/Quality:** Canal Lake (Sampled on 10/03/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	18.5	10.5	10.0
1	18.5	10.5	10.1
2	18.5	10.4	10.1
3	18.4	10.4	10.1
4	18.1	9.8	10.1
5	17.7	9.0	10.1
6	15.7	1.0	9.6
7	13.8	0.5	9.5
8	12.5	0.4	9.5
9	12.0	0.5	9.4
10	11.6	0.3	9.5
11	11.0	0.2	9.5
12	10.7	0.2	9.5

8. South Teal Lake: 3,421 pounds and 15 gallons of powdered and liquid rotenone, respectively
9. Herman Lake: Zero
10. Lyle Lake: Zero
11. Total: 28,538 pounds and 100 gallons of powdered and liquid rotenone, respectively

**Concentration of Rotenone in Formulated Rotenone Product:** 7.0% and 5.0% active ingredient for powdered and liquid rotenone, respectively.

**Concentration of Active Rotenone in Water:**

1. June Lake: 2.5ppm
2. North-North Windmill Lake: 2.5ppm
3. North Windmill Lake: 2.5ppm
4. Windmill Lake: 2.5ppm
5. Canal Lake: 2.5ppm
6. Pit Lake: 2.5ppm
7. North Teal Lake: 3.8ppm
8. South Teal Lake: 3.8ppm
9. Herman Lake:  $\leq$ 2.0ppm
10. Lyle Lake:  $\leq$ 2.0ppm

**Water Conditions/Quality:** June Lake (Sampled on 10/06/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	15.5	8.1	10.3
1	16.2	8.0	10.3
2	16.1	7.9	10.2
3	16.0	8.6	10.3
4	15.9	9.5	10.4
5	15.5	1.3	9.9
6	13.6	0.3	9.4
7	12.7	0.3	9.2
8	11.7	0.2	9.1
9	11.5	0.2	9.1

**Water Conditions/Quality:** North-North Windmill Lake (Sampled on 10/06/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	16.0	7.8	10.0
1	15.9	7.4	10.0
2	15.9	7.3	10.0
3	15.8	6.2	9.9
4	15.4	3.4	9.8

4. Windmill Lake: 28.7 feet
5. Canal Lake: 21.3 feet
6. Pit Lake: 8.2 feet
7. North Teal Lake: 16.7 feet
8. South Teal Lake: 16.6 feet
9. Herman Lake: 13.3 feet
10. Lyle Lake: 2.0 feet

**Stream Description:** Lengths and widths were not taken on the inlets and outlets of the Windmill-Canal Lake Chain drainage.

**Flow Rate of Stream/Outlet (cfs):** Flow measurements were not taken on the inlets and outlets of the Windmill-Canal Lake Chain drainage.

**Name of Fish Toxicant Product Used:** CFT Legumine Liquid and Prenfish Powdered Rotenone.

**Description of Treatment Method:** The main lake bodies were treated using a flat bottomed boat equipped with a water pump and venturi that mixes powdered rotenone with lake water. This slurry mixture was applied evenly across the main lake bodies. An airboat equipped with a water pump mixes liquid rotenone with lake water and was used to treat the shoreline and back water areas at each lake. Drip cans filled with liquid rotenone and lake water were placed at selected inlet and outlet streams. Selected areas where drip cans were placed included the spring inlet at June Lake, the inlet and outlet at North-North Windmill Lake, and the outlet at North Windmill Lake. The purpose of the drip cans was to eliminate any potential refuge areas for fish during the rehabilitations.

**Quantity of Fish Toxicant Used:**

1. June Lake: 758 pounds and 10 gallons of powdered and liquid rotenone, respectively
2. North-North Windmill Lake: 216 pounds and 10 gallons of powdered and liquid rotenone, respectively
3. North Windmill Lake: 1,659 pounds and 10 gallons of powdered and liquid rotenone, respectively
4. Windmill Lake: 5,215 pounds and 5 gallons of powdered and liquid rotenone, respectively
5. Canal Lake: 9,521 pounds and 10 gallons of powdered and liquid rotenone, respectively
6. Pit Lake: 906 pounds and 20 gallons of powdered and liquid rotenone, respectively
7. North Teal Lake: 2,545 pounds and 15 gallons of powdered and liquid rotenone, respectively

## POST TREATMENT DISCHARGE MONITORING REPORT

**Lake Name(s):** June, North-North Windmill, North Windmill, Windmill, Canal, Pit, North Teal, South Teal, Herman, and Lyle (Windmill-Canal Lake Chain)

**County:** Grant

**Township:** 16 & 17N, **Range:** 29E, & **Section(s):** 4, 5, 8, 9, 17, 21, 22, 27, 28, 32, and 33

**Purpose of Treatment:** The Windmill-Canal Lake Chain is a series of popular year-round and seasonal trout production waters located adjacent and within the Columbia National Wildlife Refuge in Grant County. Normally, these fisheries are maintained through annual fingerling trout plants. However, fingerling survival has been poor and some of these lakes have had to be maintained through catchable trout plants, which are expensive to stock. WDFW ceased stocking some of these lakes because of limited catchable trout availability. In order to return these lakes to a fingerling stocking strategy, nuisance species needed to be eradicated using rotenone. Nuisance species included common carp, largemouth bass, yellow perch, bluegill, pumpkinseed sunfish, black crappie, and bullhead. These species out compete fingerling trout for aquatic micro- and macro-invertebrates or directly prey upon them.

**Name of Licensed Applicator(s):** Chad Jackson, Chris Donley, Bill Baker, and Bob Jateff

**Lake Description:**

1. June Lake: 10.8 surface acres, 156.0 acre feet, and 424,020,464 pounds of water
2. North-North Windmill Lake: 3.8 surface acres, 44.4 acre feet, and 120,685,594 pounds of water
3. North Windmill Lake: 20.2 surface acres, 341.6 acre feet, and 928,517,990 pounds of water
4. Windmill Lake: 37.4 surface acres, 1,073.7 acre feet, and 2,918,471,213 pounds of water
5. Canal Lake: 92.2 surface acres, 1,960.2 acre feet, and 5,328,105,869 pounds of water
6. Pit Lake: 22.8 surface acres, 186.5 acre feet, and 506,933,856 pounds of water
7. North Teal Lake: 20.7 surface acres, 344.7 acre feet, and 936,944,237 pounds of water
8. South Teal Lake: 27.9 surface acres, 463.4 acre feet, and 1,219,893,000 pounds of water
9. Herman Lake: 34.7 surface acres, 460.3 acre feet, and 1,251,150,000 pounds of water
10. Lyle Lake: 22.0 surface acres, 44.9 acre feet, and 122,019,000 pounds of water

**Mean Depth:**

1. June Lake: 14.4 feet
2. North-North Windmill Lake: 11.7 feet
3. North Windmill Lake: 16.9 feet



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife DATE: 11/1/2010  
1550 Alder St NW ALS JOB#: 1010104  
Ephrata, WA 98823 ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 10/15/2010  
CLIENT PROJECT: Steal Lake COLLECTION DATE: 10/14/2010 14:00  
CLIENT SAMPLE ID ST-1 to ST-5 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/19/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/19/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/19/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 11/1/2010  
ALS JOB#: 1010104  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Steal Lake

CLIENT SAMPLE ID: ST-1 to ST-5

DATE RECEIVED: 10/15/2010  
COLLECTION DATE: 10/14/2010 14:00

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/19/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 11/1/2010  
ALS JOB#: 1010104  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Steal Lake

CLIENT SAMPLE ID: ST-1 to ST-5

DATE RECEIVED: 10/15/2010  
COLLECTION DATE: 10/14/2010 14:00

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	10/19/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	10/19/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	10/19/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 11/1/2010  
ALS JOB#: 1010104  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Steal Lake

CLIENT SAMPLE ID: ST-1 to ST-5

DATE RECEIVED: 10/15/2010  
COLLECTION DATE: 10/14/2010 14:00

WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	10/19/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	3.3	2.0	1	UG/L	10/19/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Dibenzo[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	0.32	0.050	1	UG/L	10/22/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	94.3	10/19/2010	GAP
Toluene-d8	EPA-8260	96.6	10/19/2010	GAP
4-Bromofluorobenzene	EPA-8260	95.4	10/19/2010	GAP
2-Fluorophenol	EPA-8270	49.2	10/19/2010	LAP
Phenol-d5	EPA-8270	47.2	10/19/2010	LAP
Nitrobenzene-d5	EPA-8270	99.1	10/19/2010	LAP
2-Fluorobiphenyl	EPA-8270	95.4	10/19/2010	LAP
2,4,6-Tribromophenol	EPA-8270	92.0	10/19/2010	LAP
Terphenyl-d14	EPA-8270	92.5	10/19/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	11/1/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1010104
CLIENT PROJECT:	Steal Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	ST-1 to ST-5	DATE RECEIVED:	10/15/2010
		COLLECTION DATE:	10/14/2010 14:00
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 11/1/2010  
ALS JOB#: 1010104  
WDOE ACCREDITATION: C601

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Steal Lake

## LABORATORY BLANK RESULTS

## MB-101710W2

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/17/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/17/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/17/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/17/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/17/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/17/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/17/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	10/17/2010	GAP



CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife DATE: 12/20/2010  
1550 Alder St NW ALS JOB #: 1012026  
Ephrata, WA 98823 ALS SAMPLE #: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/3/2010  
CLIENT PROJECT: S Teal Lake COLLECTION DATE: 12/1/2010 11:15  
CLIENT SAMPLE ID: ST-1 to ST-5 WDOE ACCREDITATION: C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP

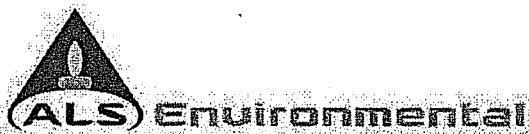
Page 1

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

ALS Laboratory Group | A Campbell Brothers Limited Company

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**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012026  
CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: S Teal Lake  
CLIENT SAMPLE ID: ST-1 to ST-5 ALS SAMPLE#: -01  
DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 11:15  
WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP

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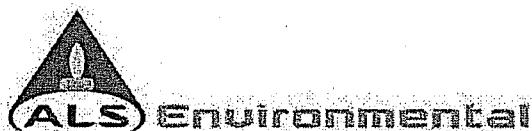
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## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: S Teal Lake

CLIENT SAMPLE ID: ST-1 to ST-5

DATE: 12/20/2010  
ALS JOB#: 1012026  
ALS SAMPLE#: -01  
DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 11:15  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP

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### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823      DATE: 11/1/2010  
ALS JOB#: 1010105  
CLIENT CONTACT: Chad Jackson      ALS SAMPLE#: -01  
CLIENT PROJECT: N Teal Lake      DATE RECEIVED: 10/15/2010  
CLIENT SAMPLE ID: NT1 - NT5      COLLECTION DATE: 10/14/2010 14:00  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/19/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/19/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/19/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife DATE: 11/1/2010  
1550 Alder St NW ALS JOB#: 1010105  
Ephrata, WA 98823 ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 10/15/2010  
CLIENT PROJECT: N Teal Lake COLLECTION DATE: 10/14/2010 14:00  
CLIENT SAMPLE ID NT1 - NT5 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/19/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE: 11/1/2010 ALS JOB#: 1010105 ALS SAMPLE#: -01
CLIENT CONTACT:	Chad Jackson	DATE RECEIVED: 10/15/2010
CLIENT PROJECT:	N Teal Lake	COLLECTION DATE: 10/14/2010 14:00
CLIENT SAMPLE ID	NT1 - NT5	WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	10/19/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	10/19/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	10/19/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 11/1/2010  
ALS JOB#: 1010105  
CLIENT CONTACT: Chad Jackson ALS SAMPLE#: -01  
CLIENT PROJECT: N Teal Lake DATE RECEIVED: 10/15/2010  
CLIENT SAMPLE ID NT1 - NT5 COLLECTION DATE: 10/14/2010 14:00  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	10/19/2010	LAP
Phenanthrrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	5.5	2.0	1	UG/L	10/19/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	0.21	0.050	1	UG/L	10/22/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	94.0	10/19/2010	GAP
Toluene-d8	EPA-8260	95.6	10/19/2010	GAP
4-Bromofluorobenzene	EPA-8260	96.1	10/19/2010	GAP
2-Fluorophenol	EPA-8270	74.1	10/19/2010	LAP
Phenol-d5	EPA-8270	77.1	10/19/2010	LAP
Nitrobenzene-d5	EPA-8270	119	10/19/2010	LAP
2-Fluorobiphenyl	EPA-8270	96.6	10/19/2010	LAP
2,4,6-Tribromophenol	EPA-8270	115	10/19/2010	LAP
Terphenyl-d14	EPA-8270	105	10/19/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	11/1/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1010105
CLIENT PROJECT:	N Teal Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	NT1 - NT5	DATE RECEIVED:	10/15/2010
		COLLECTION DATE:	10/14/2010 14:00
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 11/1/2010  
ALS JOB#: 1010105  
WDOE ACCREDITATION: C601

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: N Teal Lake

**LABORATORY BLANK RESULTS****MB-101710W2**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/17/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/17/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/17/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/17/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/17/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/17/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/17/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/17/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	10/17/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012027  
CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: N Teal Lake DATE RECEIVED: 12/3/2010  
CLIENT SAMPLE ID NT1 - NT5 COLLECTION DATE: 12/1/2010 11:15  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012027  
CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: N Teal Lake DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 11:15  
CLIENT SAMPLE ID NT1 - NT5 WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012027  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/3/2010  
CLIENT PROJECT: N Teal Lake COLLECTION DATE: 12/1/2010 11:15  
CLIENT SAMPLE ID: NT1 - NT5 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife DATE: 12/20/2010  
1550 Alder St NW ALS JOB#: 1012027  
Ephrata, WA 98823 ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/3/2010  
CLIENT PROJECT: N Teal Lake COLLECTION DATE: 12/1/2010 11:15  
CLIENT SAMPLE ID NT1 - NT5 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
Phenanthrrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/16/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	102	12/03/2010	GAP
Toluene-d8	EPA-8260	98.8	12/03/2010	GAP
4-Bromofluorobenzene	EPA-8260	102	12/03/2010	GAP
2-Fluorophenol	EPA-8270	43.1	12/06/2010	LAP
Phenol-d5	EPA-8270	37.8	12/06/2010	LAP
Nitrobenzene-d5	EPA-8270	78.4	12/06/2010	LAP
2-Fluorobiphenyl	EPA-8270	75.9	12/06/2010	LAP
2,4,6-Tribromophenol	EPA-8270	76.9	12/06/2010	LAP
Terphenyl-d14	EPA-8270	86.9	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
		ALS JOB#:	1012027
CLIENT CONTACT:	Chad Jackson	ALS SAMPLE#:	-01
CLIENT PROJECT:	N Teal Lake	DATE RECEIVED:	12/3/2010
CLIENT SAMPLE ID	NT1 - NT5	COLLECTION DATE:	12/1/2010 11:15
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.



### CERTIFICATE OF ANALYSIS

**CLIENT:** WA Dept of Fish and Wildlife  
 1550 Alder St NW  
 Ephrata, WA 98823      **DATE:** 12/20/2010  
**CLIENT CONTACT:** Chad Jackson      **ALS JOB#:** 1012027  
**CLIENT PROJECT:** N Teal Lake      **WDOE ACCREDITATION:** C601

### LABORATORY BLANK RESULTS

**MB-120110W**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/01/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/01/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/01/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/01/2010	GAP

**CERTIFICATE OF ANALYSIS**

**CLIENT:** WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823      **DATE:** 10/19/2010  
**ALS JOB#:** 1010053  
**CLIENT CONTACT:** Chad Jackson      **CLIENT PROJECT:** Pit Lake  
**CLIENT SAMPLE ID:** P1-P5      **DATE RECEIVED:** 10/8/2010  
**ALS SAMPLE#:** -01      **COLLECTION DATE:** 10/7/2010 13:30  
**WDOE ACCREDITATION:** C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/08/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/08/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/08/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1010053  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: P1-P5 DATE RECEIVED: 10/8/2010  
COLLECTION DATE: 10/7/2010 13:30  
ALS SAMPLE#: -01 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/08/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP

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ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

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**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1010053
CLIENT SAMPLE ID	P1-P5	CLIENT PROJECT:	Pit Lake
ALS SAMPLE#:	-01	DATE RECEIVED:	10/8/2010
		COLLECTION DATE:	10/7/2010 13:30
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	10/11/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	10/11/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	10/11/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1010053  
CLIENT PROJECT: Pit Lake

CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID P1-P5

DATE RECEIVED: 10/8/2010  
COLLECTION DATE: 10/7/2010 13:30

ALS SAMPLE#: -01

WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	10/11/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	1.0	1	UG/L	10/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	102	10/08/2010	GAP
Toluene-d8	EPA-8260	92.9	10/08/2010	GAP
4-Bromofluorobenzene	EPA-8260	102	10/08/2010	GAP
2-Fluorophenol	EPA-8270	33.1	10/11/2010	LAP
Phenol-d5	EPA-8270	29.6	10/11/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1010053
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	Pit Lake
CLIENT SAMPLE ID	P1-P5	DATE RECEIVED:	10/8/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	10/7/2010 13:30
		WDOE ACCREDITATION:	C601

### DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	SW8270	58.5	10/11/2010	LAP
2-Fluorobiphenyl	EPA-8270	48.6	10/11/2010	LAP
2,4,6-Tribromophenol	EPA-8270	53.0	10/11/2010	LAP
Terphenyl-d14	SW8270	57.4 GS6	10/11/2010	LAP

U - Analyte analyzed for but not detected at level above reporting limit.

GS6 - Surrogate outside of control limits. Single surrogate outlier per fraction is acceptable as per Method 8270D.



**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

**CLIENT:** WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823      **DATE:** 10/19/2010  
**CLIENT CONTACT:** Chad Jackson      **ALS JOB#:** 1010053  
**CLIENT PROJECT:** Pit Lake  
**WDOE ACCREDITATION:** C601

**LABORATORY/BLANK RESULTS**

**MB-100810W**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/08/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/08/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/08/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	10/08/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012031  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Pit Lake

CLIENT SAMPLE ID: P1 - P5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 11:30

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP

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ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

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### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB #: 1012031  
ALS SAMPLE #: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Pit Lake

CLIENT SAMPLE ID: P1 - P5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 11:30  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP

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ALS Laboratory Group A Campbell Brothers Limited Company

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## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012031  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/3/2010  
CLIENT PROJECT: Pit Lake COLLECTION DATE: 12/1/2010 11:30  
CLIENT SAMPLE ID: P1 - P5 WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012031  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Pit Lake

CLIENT SAMPLE ID: P1 - P5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 11:30

WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
Phenanthren	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/16/2010	ASL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	98.2	12/03/2010	GAP
Toluene-d8	EPA-8260	100	12/03/2010	GAP
4-Bromofluorobenzene	EPA-8260	104	12/03/2010	GAP
2-Fluorophenol	EPA-8270	36.9	12/06/2010	LAP
Phenol-d5	EPA-8270	35.7	12/06/2010	LAP
Nitrobenzene-d5	EPA-8270	73.0	12/06/2010	LAP
2-Fluorobiphenyl	EPA-8270	68.3	12/06/2010	LAP
2,4,6-Tribromophenol	EPA-8270	66.5	12/06/2010	LAP
Terphenyl-d14	EPA-8270	69.0	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1012031
CLIENT PROJECT:	Pit Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	P1 - P5	DATE RECEIVED:	12/3/2010
		COLLECTION DATE:	12/1/2010 11:30
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012031  
WDOE ACCREDITATION: C601

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Pit Lake

## LABORATORY BLANK RESULTS

## MB-120110W

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/01/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/01/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/01/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/01/2010	GAP

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### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1010051
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	NN Windmill Lake
CLIENT SAMPLE ID	NNw1-NNW2	DATE RECEIVED:	10/8/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	10/7/2010 11:30
		WDOE ACCREDITATION:	C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/08/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/08/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/08/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

CLIENT CONTACT: Chad Jackson

CLIENT SAMPLE ID: NNw1-NNW2

ALS SAMPLE#: -01

DATE: 10/19/2010  
ALS JOB#: 1010051

CLIENT PROJECT: NN Windmill Lake

DATE RECEIVED: 10/8/2010

COLLECTION DATE: 10/7/2010 11:30

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/08/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1010051  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: NNw1-NNW2 CLIENT PROJECT: NN Windmill Lake  
ALIS SAMPLE#: -01 DATE RECEIVED: 10/8/2010  
COLLECTION DATE: 10/7/2010 11:30  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	10/11/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	10/11/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	10/11/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP

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**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	<b>DATE:</b> 10/19/2010 <b>ALS JOB#:</b> 1010051
<b>CLIENT CONTACT:</b>	Chad Jackson	<b>CLIENT PROJECT:</b> NN Windmill Lake
<b>CLIENT SAMPLE ID</b>	NNw1-NNW2	<b>DATE RECEIVED:</b> 10/8/2010
<b>ALS SAMPLE#:</b>	-01	<b>COLLECTION DATE:</b> 10/7/2010 11:30 <b>WDOE ACCREDITATION:</b> C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	ANALYSIS		
					UNITS	DATE	BY
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	10/11/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	11	1.0	1	UG/L	10/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS		
			DATE	BY	
1,2-Dichloroethane-d4	EPA-8260	101	10/08/2010	GAP	
Toluene-d8	EPA-8260	91.8	10/08/2010	GAP	
4-Bromofluorobenzene	EPA-8260	101	10/08/2010	GAP	
2-Fluorophenol	EPA-8270	44.4	10/11/2010	LAP	
Phenol-d5	EPA-8270	38.4	10/11/2010	LAP	



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1010051
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	NN Windmill Lake
CLIENT SAMPLE ID	NNw1-NNW2	DATE RECEIVED:	10/8/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	10/7/2010 11:30
		WDOE ACCREDITATION:	C601

### DATA RESULTS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	SW8270	84.5	10/11/2010	LAP
2-Fluorobiphenyl	EPA-8270	68.0	10/11/2010	LAP
2,4,6-Tribromophenol	EPA-8270	75.3	10/11/2010	LAP
Terphenyl-d14	SW8270	86.5	10/11/2010	LAP

U - Analyte analyzed for but not detected at level above reporting limit.



**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

**CLIENT:** WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

**DATE:** 10/19/2010  
**ALS JOB#:** 1010051

**CLIENT CONTACT:** Chad Jackson

**CLIENT PROJECT:** NN Windmill Lake

**WDOE ACCREDITATION:** C601

**LABORATORY BLANK RESULTS**

**MB-100810W**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/08/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/08/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/08/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	10/08/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP

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### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012029  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: NN Windmill Lake

DATE RECEIVED: 12/3/2010

CLIENT SAMPLE ID: NNW1 - NNW2

COLLECTION DATE: 12/1/2010 13:00

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP

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**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	<b>DATE:</b> 12/20/2010 <b>ALS JOB#:</b> 1012029 <b>ALS SAMPLE#:</b> -01
<b>CLIENT CONTACT:</b>	Chad Jackson	<b>DATE RECEIVED:</b> 12/3/2010
<b>CLIENT PROJECT:</b>	NN Windmill Lake	<b>COLLECTION DATE:</b> 12/1/2010 13:00
<b>CLIENT SAMPLE ID</b>	NNW1 - NNW2	<b>WDOE ACCREDITATION:</b> C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012029  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: NN Windmill Lake  
CLIENT SAMPLE ID: NNW1 - NNW2

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 13:00  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012029  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: NN Windmill Lake

CLIENT SAMPLE ID: NNW1 - NNW2

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 13:00

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzo[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/16/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	101	12/03/2010	GAP
Toluene-d8	EPA-8260	96.8	12/03/2010	GAP
4-Bromofluorobenzene	EPA-8260	103	12/03/2010	GAP
2-Fluorophenol	EPA-8270	47.6	12/06/2010	LAP
Phenol-d5	EPA-8270	46.7	12/06/2010	LAP
Nitrobenzene-d5	EPA-8270	99.0	12/06/2010	LAP
2-Fluorobiphenyl	EPA-8270	80.7	12/06/2010	LAP
2,4,6-Tribromophenol	EPA-8270	83.3	12/06/2010	LAP
Terphenyl-d14	EPA-8270	76.7	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1012029
CLIENT PROJECT:	NN Windmill Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	NNW1 - NNW2	DATE RECEIVED:	12/3/2010
		COLLECTION DATE:	12/1/2010 13:00
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012029  
WDOE ACCREDITATION: C601

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: NN Windmill Lake

### LABORATORY BLANK RESULTS

#### MB-120110W

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/01/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/01/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/01/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/01/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1010050  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID NW1-NW5 DATE RECEIVED: 10/8/2010  
ALIS SAMPLE#: -01 COLLECTION DATE: 10/7/2010 13:30  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/08/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/08/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/08/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1010050  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: NW1-NW5 CLIENT PROJECT: N. Windmill Lake  
ALS SAMPLE#: -01 DATE RECEIVED: 10/8/2010  
COLLECTION DATE: 10/7/2010 13:30  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/08/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1010050  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: NW1-NW5 CLIENT PROJECT: N. Windmill Lake  
ALS SAMPLE#: -01 DATE RECEIVED: 10/8/2010  
COLLECTION DATE: 10/7/2010 13:30  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	10/11/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	10/11/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	10/11/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1010050  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: NW1-NW5 CLIENT PROJECT: N. Windmill Lake  
DATE RECEIVED: 10/8/2010  
ALC SAMPLE#: -01 COLLECTION DATE: 10/7/2010 13:30  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	10/11/2010	LAP
Phenanthrrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	15	1.0	1	UG/L	10/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	101	10/08/2010	GAP
Toluene-d8	EPA-8260	91.7	10/08/2010	GAP
4-Bromofluorobenzene	EPA-8260	102	10/08/2010	GAP
2-Fluorophenol	EPA-8270	44.7	10/11/2010	LAP
Phenol-d5	EPA-8270	39.5	10/11/2010	LAP



**(ALS) Environmental**

**CERTIFICATE OF ANALYSIS**

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1010050
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	N. Windmill Lake
CLIENT SAMPLE ID	NW1-NW5	DATE RECEIVED:	10/8/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	10/7/2010 13:30
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
Nitrobenzene-d5	SW8270	91.3	10/11/2010	LAP
2-Fluorobiphenyl	EPA-8270	55.1	10/11/2010	LAP
2,4,6-Tribromophenol	EPA-8270	78.9	10/11/2010	LAP
Terphenyl-d14	SW8270	84.8	10/11/2010	LAP

U - Analyte analyzed for but not detected at level above reporting limit.



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1010050

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: N. Windmill Lake

WDOE ACCREDITATION: C601

## LABORATORY BLANK RESULTS

## MB-100810W

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/08/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/08/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/08/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	10/08/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012028  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/3/2010  
CLIENT PROJECT: N Windmill Lake COLLECTION DATE: 12/1/2010 13:00  
CLIENT SAMPLE ID NW1 - NW5 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012028  
CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: N Windmill Lake  
CLIENT SAMPLE ID: NW1 - NW5  
ALS SAMPLE#: -01  
DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 13:00  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012028  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: N Windmill Lake

DATE RECEIVED: 12/3/2010

CLIENT SAMPLE ID: NW1 - NW5

COLLECTION DATE: 12/1/2010 13:00

WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012028  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: N Windmill Lake

CLIENT SAMPLE ID: NW1 - NW5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 13:00

WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benz[a]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benz[b]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benz[k]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benz[a]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzo[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/16/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	100	12/03/2010	GAP
Toluene-d8	EPA-8260	94.7	12/03/2010	GAP
4-Bromofluorobenzene	EPA-8260	104	12/03/2010	GAP
2-Fluorophenol	EPA-8270	45.5	12/06/2010	LAP
Phenol-d5	EPA-8270	43.0	12/06/2010	LAP
Nitrobenzene-d5	EPA-8270	91.0	12/06/2010	LAP
2-Fluorobiphenyl	EPA-8270	75.3	12/06/2010	LAP
2,4,6-Tribromophenol	EPA-8270	81.6	12/06/2010	LAP
Terphenyl-d14	EPA-8270	90.1	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1012028
CLIENT PROJECT:	N Windmill Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	NW1 - NW5	DATE RECEIVED:	12/3/2010
		COLLECTION DATE:	12/1/2010 13:00
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012028  
WDOE ACCREDITATION: C601

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: N Windmill Lake

### LABORATORY BLANK RESULTS

#### MB-120110W

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/01/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/01/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/01/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/01/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823      DATE: 10/19/2010  
ALS JOB#: 1010049  
CLIENT CONTACT: Chad Jackson      CLIENT PROJECT: Canal Lake  
CLIENT SAMPLE ID: C1-C5      DATE RECEIVED: 10/8/2010  
ALS SAMPLE#: -01      COLLECTION DATE: 10/7/2010 13:30  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/08/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/08/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/08/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP

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ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

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### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 10/19/2010  
ALS JOB#: 1010049

CLIENT CONTACT: Chad Jackson

CLIENT SAMPLE ID: C1-C5

COLLECTION DATE: 10/7/2010 13:30

ALS SAMPLE#: -01

WDOE ACCREDITATION: C601

CLIENT PROJECT: Canal Lake

DATE RECEIVED: 10/8/2010

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/08/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,3 Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/08/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/08/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 10/19/2010  
ALS JOB#: 1010049  
CLIENT CONTACT: Chad Jackson  
CLIENT SAMPLE ID: C1-C5 CLIENT PROJECT: Canal Lake  
ALS SAMPLE#: -01 DATE RECEIVED: 10/8/2010  
COLLECTION DATE: 10/7/2010 13:30  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	10/11/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	10/11/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	10/11/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP



**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	10/19/2010
		ALS JOB#:	1010049
CLIENT CONTACT:	Chad Jackson	CLIENT PROJECT:	Canal Lake
CLIENT SAMPLE ID	C1-C5	DATE RECEIVED:	10/8/2010
ALS SAMPLE#:	-01	COLLECTION DATE:	10/7/2010 13:30
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	10/11/2010	LAP
Phenanthrrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	10/11/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	1.0	1	UG/L	10/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	99.6	10/08/2010	GAP
Toluene-d8	EPA-8260	92.8	10/08/2010	GAP
4-Bromofluorobenzene	EPA-8260	101	10/08/2010	GAP
2-Fluorophenol	EPA-8270	45.6	10/11/2010	LAP
Phenol-d5	EPA-8270	40.8	10/11/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012030  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/3/2010  
CLIENT PROJECT: Conal Lake COLLECTION DATE: 12/1/2010 12:00  
CLIENT SAMPLE ID C1 - C5 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP

Page 1

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**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012030  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Conal Lake

CLIENT SAMPLE ID: C1 - C5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 12:00

WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012030  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Conal Lake  
CLIENT SAMPLE ID: C1 - C5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 12:00  
WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



## CERTIFICATE OF ANALYSIS

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1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012030  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Conal Lake

CLIENT SAMPLE ID: C1 - C5

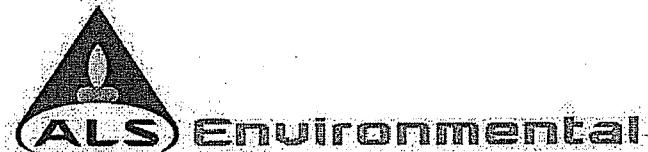
DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 12:00

WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benz[a]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benz[b]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benz[k]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benz[a]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzo[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/16/2010	ASL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	101	12/03/2010	GAP
Toluene-d8	EPA-8260	97.1	12/03/2010	GAP
4-Bromofluorobenzene	EPA-8260	102	12/03/2010	GAP
2-Fluorophenol	EPA-8270	46.1	12/06/2010	LAP
Phenol-d5	EPA-8270	40.6	12/06/2010	LAP
Nitrobenzene-d5	EPA-8270	87.9	12/06/2010	LAP
2-Fluorobiphenyl	EPA-8270	80.1	12/06/2010	LAP
2,4,6-Tribromophenol	EPA-8270	78.7	12/06/2010	LAP
Terphenyl-d14	EPA-8270	88.4	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1012030
CLIENT PROJECT:	Conal Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	C1 - C5	DATE RECEIVED:	12/3/2010
		COLLECTION DATE:	12/1/2010 12:00
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.





## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 11/1/2010  
ALS JOB#: 1010106  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 10/15/2010  
CLIENT PROJECT: June Lake COLLECTION DATE: 10/14/2010 14:00  
CLIENT SAMPLE ID: J1 - J5 WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	10/19/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	10/19/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	10/19/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 11/1/2010  
ALS JOB#: 1010106  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: June Lake

CLIENT SAMPLE ID: J1 - J5

DATE RECEIVED: 10/15/2010  
COLLECTION DATE: 10/14/2010 14:00

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	10/19/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
c-Xylene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	10/19/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	10/19/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 11/1/2010  
ALS JOB#: 1010106  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: June Lake

CLIENT SAMPLE ID: J1 - J5

DATE RECEIVED: 10/15/2010  
COLLECTION DATE: 10/14/2010 14:00

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	10/19/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-MethylNaphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	10/19/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	10/19/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP



**CERTIFICATE OF ANALYSIS**

**CLIENT:** WA Dept of Fish and Wildlife  
 1550 Alder St NW  
 Ephrata, WA 98823

**CLIENT CONTACT:** Chad Jackson  
**CLIENT PROJECT:** June Lake  
**CLIENT SAMPLE ID:** J1 - J5

**DATE:** 11/1/2010  
**ALS JOB#:** 1010106  
**ALS SAMPLE#:** -01  
**DATE RECEIVED:** 10/15/2010  
**COLLECTION DATE:** 10/14/2010 14:00  
**WDOE ACCREDITATION:** C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING	DILUTION FACTOR	UNITS	ANALYSIS	ANALYSIS
			LIMITS			DATE	BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	10/19/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	5.5	2.0	1	UG/L	10/19/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	10/19/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	3.0	0.050	1	UG/L	10/22/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS	ANALYSIS
			DATE	BY
1,2-Dichloroethane-d4	EPA-8260	94.8	10/19/2010	GAP
Toluene-d8	EPA-8260	96.3	10/19/2010	GAP
4-Bromofluorobenzene	EPA-8260	94.6	10/19/2010	GAP
2-Fluorophenol	EPA-8270	59.3	10/19/2010	LAP
Phenol-d5	EPA-8270	66.7	10/19/2010	LAP
Nitrobenzene-d5	EPA-8270	116	10/19/2010	LAP
2-Fluorobiphenyl	EPA-8270	99.5	10/19/2010	LAP
2,4,6-Tribromophenol	EPA-8270	117	10/19/2010	LAP
Terphenyl-d14	EPA-8270	122	10/19/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	11/1/2010
		ALS JOB#:	1010106
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Chad Jackson	DATE RECEIVED:	10/15/2010
CLIENT PROJECT:	June Lake	COLLECTION DATE:	10/14/2010 14:00
CLIENT SAMPLE ID	J1 - J5	WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.





## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife DATE: 12/20/2010  
1550 Alder St NW ALS JOB#: 1012032  
Ephrata, WA 98823 ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/3/2010  
CLIENT PROJECT: June Lake COLLECTION DATE: 12/1/2010 13:00  
CLIENT SAMPLE ID J1 - J5 WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012032  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: June Lake

CLIENT SAMPLE ID: J1 - J5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 13:00

WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012032  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: June Lake

CLIENT SAMPLE ID: J1 - J5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 13:00

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/07/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/07/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/07/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012032  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: June Lake  
CLIENT SAMPLE ID: J1 - J5

DATE RECEIVED: 12/3/2010  
COLLECTION DATE: 12/1/2010 13:00

WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/07/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Dibenzo[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/07/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	U	0.050	1	UG/L	12/16/2010	ASL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	108	12/03/2010	GAP
Toluene-d8	EPA-8260	97.7	12/03/2010	GAP
4-Bromofluorobenzene	EPA-8260	101	12/03/2010	GAP
2-Fluorophenol	EPA-8270	46.4	12/07/2010	LAP
Phenol-d5	EPA-8270	43.3	12/07/2010	LAP
Nitrobenzene-d5	EPA-8270	101	12/07/2010	LAP
2-Fluorobiphenyl	EPA-8270	81.2	12/07/2010	LAP
2,4,6-Tribromophenol	EPA-8270	86.0	12/07/2010	LAP
Terphenyl-d14	EPA-8270	85.8	12/07/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
		ALS JOB#:	1012032
		ALS SAMPLE#:	-01
CLIENT CONTACT:	Chad Jackson	DATE RECEIVED:	12/3/2010
CLIENT PROJECT:	June Lake	COLLECTION DATE:	12/1/2010 13:00
CLIENT SAMPLE ID	J1 - J5	WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.



## **POST TREATMENT DISCHARGE MONITORING REPORT**

**Lake Name(s):** Heart

**County:** Grant

**Township: 17N, Range: 29E, & Section(s): 28**

**Purpose of Treatment:** Heart Lake is a popular year-round trout production water located adjacent to the Columbia National Wildlife Refuge in Grant County. Normally, the fishery is maintained through annual fingerling trout plants. However, fingerling trout survival has been poor and the fishery had to be maintained through catchable trout plants, which are expensive to stock. In order to return this lake to a fingerling planting strategy, nuisance fish species needed to be eradicated using rotenone. Nuisance fish species included bluegill, pumpkinseed sunfish, largemouth bass, and black crappie. These species out compete fingerling trout for aquatic micro- and macro-invertebrates or directly prey upon them.

**Name of Licensed Applicator(s):** Chad Jackson, Chris Donley, Bill Baker, and Bob Jateff

**Lake Description:** 26.4 surface acres, 884.8 acre feet, and 2,405,013,811 pounds of water

**Mean Depth:** 35.5 feet

**Stream Description:** N/A

**Flow Rate of Stream/Outlet (cfs):** N/A

**Name of Fish Toxicant Product Used:** Prenfish Powdered Rotenone

**Description of Treatment Method:** The entire lake was treated using a flat-bottomed boat equipped with a water pump and venturi that mixes powdered rotenone with lake water. This slurry mixture was applied evenly across the entire lake. Due to the steep shoreline features of Heart Lake, WDFW staff were able to maneuver within spraying distance of the shoreline making it unnecessary use liquid rotenone.

**Quantity of Fish Toxicant Used:** 4,298 pounds of powdered rotenone

**Concentration of Rotenone in Formulated Rotenone Product:** 7.0% active ingredient for powdered rotenone.

**Concentration of Active Rotenone in Water: 2.5ppm**

**Water Conditions/Quality: Heart Lake (Sampled on 10/03/10)**

Depth (m)	Temp °C	DO (ppm)	pH
Surface	18.7	12.9	10.4
1	18.7	13.0	10.4
2	18.7	13.0	10.5
3	18.6	12.7	10.5
4	18.5	11.9	10.4
5	18.3	11.8	10.4
6	17.7	10.0	10.4
7	16.5	5.8	10.1
8	14.1	5.2	10.1

**Detoxification of Rotenone Treated Water (If Required): Description of Detoxification Methods/Equipment; Potassium Permangate Application Rate (Pounds Per Hour); Flow Rate of Stream/Outlet (cfs); Estimate of Average Concentration (ppm): N/A**

**Description of Lake Inlet(s)/Outlet(s) and Any Temporary Water Control Measures: N/A**

**Period of Toxicity:** Unknown. The entire Windmill-Canal Lake Chain froze over during the week of November 22<sup>nd</sup>, 2010 and remained frozen until late-February 2011. Staff was unable to place live traps with sentinel fish into any of these lakes. Fished stocked post ice out survived well indicating that some time during ice over the lake detoxified.

**Eradicated Fish Species:** bluegill, pumpkinseed sunfish, largemouth bass, black crappie and rainbow trout.

**Results of Pre and Post Treatment Monitoring:** Prior to the treatment, Heart Lake was sampled for various water quality parameters including temperature, dissolved oxygen, pH, and zooplankton. Results from the pre-treatment water quality sampling are provided above. VOC, semi-VOC, and N-methylpyrrolidone were not sampled at Heart Lake because no liquid rotenone was used during the rehabilitation. As stipulated in WDFW's NPDES permit, only waters treated with liquid rotenone require VOC, semi-VOC, and N-methylpyrrolidone sampling 24 hours and one month post treatment.

**Impact on Non-Target Organisms:** None observed

**Brief Description of Treatment/Detoxification and Other Comments:** Treatment began and ended on October 5<sup>th</sup>. A pumper boat was used to apply powdered rotenone to the entire lake including the shoreline. Within a couple hours of treatment, stressed fish were observed along

the shoreline and at the lake surface. Following the rehabilitation on October 6<sup>th</sup>, several thousand dead fish were observed along the shoreline and at the lake surface. Species observed, in order of abundance, included pumpkinseed sunfish, bluegill, largemouth bass, black crappie, and rainbow trout. Fish ranged anywhere from one to 12+ inches in length. The largest fish species observed were largemouth bass and rainbow trout.

The exact date Heart Lake detoxified is unknown. Following the rehabilitation, Heart Lake completely froze over the week of November 22<sup>nd</sup>, 2010 and remained frozen until late-February 2011. Staff was unable to place live traps with sentinel fish into Heart Lake post treatment. It is assumed that Heart Lake detoxified within a couple months post treatment.

**List of Lakes/Streams Proposed for Treatment Next Year: None**



## **POST TREATMENT DISCHARGE MONITORING REPORT**

**Lake Name(s):** Martha

**County:** Grant

**Township: 19N, Range: 24E, & Section(s): 32**

**Purpose of Treatment:** Martha Lake is a popular March 1<sup>st</sup> opening day trout production water located just north of George, WA. Several thousand anglers visit Martha Lake each year to fish for trout. Normally, the fishery is maintained through annual fingerling trout plants. However, fingerling trout survival has been poor and the fishery had to be maintained through catchable and triploid trout plants, which are expensive to stock. In order to return this lake into a fingerling planting strategy, nuisance fish species needed to be eradicated using rotenone. Nuisance species included yellow perch, pumpkinseed sunfish, and largemouth bass. These species out compete fingerling trout for aquatic micro- and macro-invertebrates or directly prey upon them.

**Name of Licensed Applicator(s):** Chad Jackson, Chris Donley, Bill Baker, and Bob Jateff

**Lake Description:** 20.2 surface acres, 161.6 acre feet, and 439,252,170 pounds of water

**Maximum and Mean Depth:** 8.0 feet

**Stream Description: Width:** N/A **Length:** N/A

**Flow Rate of Stream/Outlet (cfs):** N/A

**Name of Fish Toxicant Product Used:** CFT Legumine Liquid and Prenfish Powdered Rotenone.

**Description of Treatment Method:** The main lake body was treated using a flat bottomed boat equipped with water pump and venturi that mixes powdered rotenone with lake water. This slurry mixture was applied evenly across the main lake body. An airboat equipped with a water pump mixes liquid rotenone with lake water and was used to treat the shoreline and back water areas of the lake.

**Quantity of Fish Toxicant Used:** 785 pounds and 30 gallons of powdered and liquid rotenone, respectively.

**Concentration of Rotenone in Formulated Rotenone Product:** 7.0% and 5.0% active ingredient for powdered and liquid product, respectively.

**Concentration of Active Rotenone in Water:** 2.5ppm

**Water Conditions/Quality:** Martha Lake (Sampled on 10/25/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	10.7	11.2	8.9
1	10.7	11.2	9.0
2	10.7	11.5	9.2

**Detoxification of Rotenone Treated Water (If Required): Description of Detoxification Methods/Equipment; Potassium Permanganate Application Rate (Pounds Per Hour); Flow Rate of Stream/Outlet (cfs); Estimate of Average Concentration (ppm):** N/A

**Description of Lake Inlet(s)/Outlet(s) and Any Temporary Water Control Measures:** N/A

**Period of Toxicity:** Approximately 1.5 months

**Eradicated Fish Species:** None (see below)

**Results of Pre and Post Treatment Monitoring:** Prior to the treatment, Martha Lake was sampled for various water quality parameters including temperature, dissolved oxygen, pH, and zooplankton. Results from the pre-treatment water quality sampling are provided above. Post lake rehabilitation sampling included VOC, semi-VOC, and N-methylpyrrolidone within 24 hours and one month after the treatment.

**Impact on Non-Target Organisms:** None observed

**Brief Description of Treatment/Detoxification and Other Comments:** Treatment began and ended on October 26<sup>th</sup>. A pumper boat and airboat were used to apply powdered and liquid rotenone, respectively. During and following the rehabilitation, no fish were observed stressed or dead along the shoreline or at the lake surface. On the following two days (October 27<sup>th</sup> and 28<sup>th</sup>), no dead fish were observed along the shoreline or at the lake surface, except for one brown bullhead seen dead near the boat ramp. It is unclear why no stressed or dead fish were observed during or following the rehabilitation. The only likely scenario is that Martha Lake may have winter killed one or more times in the past 3-4 years. Martha Lake's average depth is only eight feet with a maximum around 14-15 feet. Thick ice conditions followed by heavy snowfall could have turned Martha Lake anoxic for extended periods of time during the winter. However, there are several springs located at the northwest end of the lake that usually offer overwinter refuge and typically keep this end of the lake ice free during the winter.

Martha Lake detoxified approximately 1.5 months later. Two live traps with six sentinel fish each were placed into the lake on December 6<sup>th</sup> and retrieved 48 hours later on December 8<sup>th</sup>. A total of 11 of the 12 sentinel fish survived. The one fish mortality was likely related to release stress.

**List of Lakes/Streams Proposed for Treatment Next Year:** None





## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 11/15/2010  
ALS JOB#: 1011012  
CLIENT CONTACT: Chad Jackson ALS SAMPLE#: -01  
CLIENT PROJECT: Martha Lake DATE RECEIVED: 11/2/2010  
CLIENT SAMPLE ID: M1-M5 COLLECTION DATE: 10/27/2010 13:45  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	11/02/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	11/02/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	11/02/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP

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**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 11/15/2010  
ALS JOB#: 1011012  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Martha Lake

CLIENT SAMPLE ID: M1-M5

DATE RECEIVED: 11/2/2010  
COLLECTION DATE: 10/27/2010 13:45

WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/02/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 11/15/2010  
ALS JOB#: 1011012  
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CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Martha Lake

CLIENT SAMPLE ID: M1-M5

DATE RECEIVED: 11/2/2010  
COLLECTION DATE: 10/27/2010 13:45  
WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/03/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/03/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/03/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 11/15/2010  
ALS JOB#: 1011012  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Martha Lake

CLIENT SAMPLE ID: M1-M5

DATE RECEIVED: 11/2/2010  
COLLECTION DATE: 10/27/2010 13:45  
WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/03/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	2.5	2.0	1	UG/L	11/03/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	2.1	0.050	1	UG/L	11/12/2010	ASL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	105	11/02/2010	GAP
Toluene-d8	EPA-8260	98.2	11/02/2010	GAP
4-Bromofluorobenzene	EPA-8260	98.9	11/02/2010	GAP
2-Fluorophenol	EPA-8270	45.2	11/03/2010	LAP
Phenol-d5	EPA-8270	41.1	11/03/2010	LAP
Nitrobenzene-d5	EPA-8270	86.5	11/03/2010	LAP
2-Fluorobiphenyl	EPA-8270	84.1	11/03/2010	LAP
2,4,6-Tribromophenol	EPA-8270	86.1	11/03/2010	LAP
Terphenyl-d14	EPA-8270	83.9	11/03/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	11/15/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1011012
CLIENT PROJECT:	Martha Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	M1-M5	DATE RECEIVED:	11/2/2010
		COLLECTION DATE:	10/27/2010 13:45
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.





### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012017  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/1/2010  
CLIENT PROJECT: Martha Lake COLLECTION DATE: 11/29/2010 13:45  
CLIENT SAMPLE ID: M-1 to M-5 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012017  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Martha Lake  
CLIENT SAMPLE ID: M-1 to M-5

DATE RECEIVED: 12/1/2010  
COLLECTION DATE: 11/29/2010 13:45  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823 DATE: 12/20/2010  
ALS JOB#: 1012017  
ALS SAMPLE#: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 12/1/2010  
CLIENT PROJECT: Martha Lake COLLECTION DATE: 11/29/2010 13:45  
CLIENT SAMPLE ID: M-1 to M-5 WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP

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ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626

ALS Laboratory Group A Campbell Brothers Limited Company



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## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012017  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Martha Lake  
CLIENT SAMPLE ID: M-1 to M-5

DATE RECEIVED: 12/1/2010  
COLLECTION DATE: 11/29/2010 13:45  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzo[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	0.17	0.050	1	UG/L	12/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	101	12/03/2010	GAP
Toluene-d8	EPA-8260	99.6	12/03/2010	GAP
4-Bromofluorobenzene	EPA-8260	105	12/03/2010	GAP
2-Fluorophenol	EPA-8270	45.1	12/06/2010	LAP
Phenol-d5	EPA-8270	45.2	12/06/2010	LAP
Nitrobenzene-d5	EPA-8270	88.5	12/06/2010	LAP
2-Fluorobiphenyl	EPA-8270	69.9	12/06/2010	LAP
2,4,6-Tribromophenol	EPA-8270	76.9	12/06/2010	LAP
Terphenyl-d14	EPA-8270	84.9	12/06/2010	LAP



**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1012017
CLIENT PROJECT:	Martha Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	M-1 to M-5	DATE RECEIVED:	12/1/2010
		COLLECTION DATE:	11/29/2010 13:45
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

U - Analyte analyzed for but not detected at level above reporting limit.



## POST TREATMENT DISCHARGE MONITORING REPORT

**Lake Name(s):** Upper Caliche, Lower Caliche, and West Caliche

**County:** Grant

**Township: 18N, Range: 23E, & Section(s): 22, 23, 27, and 32**

**Purpose of Treatment:** Upper Caliche Lake is a popular March 1<sup>st</sup> opening day production trout water located just south of George, WA. Several thousand anglers visit Upper Caliche Lake each year to fish for trout. Normally, the fishery at Upper Caliche Lake is maintained through annual fingerling trout plants. However, fingerling trout survival has been poor and the fishery has had to be maintained through catchable and triploid trout plants, which are expensive to stock. In order to return this lake to a fingerling planting strategy, nuisance fish species needed to be eradicated using rotenone. Nuisance species included yellow perch, pumpkinseed sunfish, and smallmouth bass. These species were out competing fingerling trout for aquatic micro- and macro-invertebrates or directly preying upon them.

Historically, Lower and West Caliche Lakes were managed similar to Upper Caliche and they offered good trout fishing, over time these lakes have shallowed and warmed, thus becoming less suitable for trout production. As a result, the long term management objective is not to develop these lakes into trout production waters similar to Upper Caliche. Because they are hydrologically connected to Upper Caliche they received rotenone treated water. These two bodies of water had only partial kills on the aforementioned nuisance species, and are expected to produce only minor trout fisheries.

**Name of Licensed Applicator(s):** Chad Jackson, Chris Donley, Bill Baker, and Bob Jateff

**Lake Description:**

1. Upper Caliche Lake: 13.0 surface acres, 221.0 acre feet, and 250,069,250 pounds of water
2. Lower Caliche Lake: 11.7 surface acres, 49.9 acre feet, and 135,553,841 pounds of water
3. West Caliche Lake: 3.7 surface acres, 9.2 acre feet, and 24,952,562 pound of water

**Maximum and Mean Depth:**

1. Upper Caliche Lake: 17.0 feet
2. Lower Caliche Lake: 4.3 feet
3. West Caliche Lake: 2.5 feet

**Stream Description:** Width: < 2 feet Length: < 300 feet

**Flow Rate of Stream/Outlet (cfs):** Not taken

**Name of Fish Toxicant Product Used:** CFT Legumine Liquid and Prenfish Powdered Rotenone.

**Description of Treatment Method:** The main lake body of Upper Caliche Lake was treated using a flat bottomed boat equipped with a water pump and venturi that mixes powdered rotenone with lake water. This slurry mixture was applied evenly across the main lake body. An airboat equipped with a water pump mixed liquid rotenone with lake water and was used to treat the shoreline and back water areas of Upper Caliche Lake. Lower and West Caliche Lakes were not physically treated with powdered or liquid rotenone. Instead, these lakes served as dilution/detoxification basins for treated water leaving Upper Caliche Lake.

**Quantity of Fish Toxicant Used:**

1. Upper Caliche Lake: 1,073 pounds and 70 gallons of powdered and liquid rotenone, respectively
2. Lower Caliche Lake: zero
3. West Caliche Lake: zero
4. Total: 1,073 pounds and 70 gallons of powdered and liquid rotenone, respectively

**Concentration of Rotenone in Formulated Rotenone Product:** 7.0% and 5.0% active ingredient for powdered and liquid product, respectively.

**Concentration of Active Rotenone in Water:**

1. Upper Caliche Lake: 2.5ppm
2. Lower Caliche Lake: ≤ 2.5ppm
3. West Caliche Lake: ≤ 2.0ppm

**Water Conditions/Quality:** Upper Caliche Lake (Sampled on 10/25/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	11.2	12.8	9.0
1	11.2	12.9	9.2
2	11.2	12.9	9.3
3	11.2	12.9	9.4
4	11.2	12.9	9.4
4.25 (bottom)	11.2	9.8	9.4

**Water Conditions/Quality:** Lower Caliche Lake (Sampled on 10/25/10)

Depth (m)	Temp °C	DO (ppm)	pH
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Surface	10.9	11.9	9.2
1	10.9	11.9	9.1
2	10.9	11.9	9.1
2.4 (bottom)	10.9	11.9	9.1

**Water Conditions/Quality:** West Caliche Lake (Sampled on 10/25/10)

Depth (m)	Temp °C	DO (ppm)	pH
Surface	11.0	11.0	8.9
1	11.0	10.9	9.0
1.1 (bottom)	11.0	11.0	9.0

**Detoxification of Rotenone Treated Water (If Required): Description of Detoxification Methods/Equipment; Potassium Permangate Application Rate (Pounds Per Hour); Flow Rate of Stream/Outlet (cfs); Estimate of Average Concentration (ppm):** Only Upper Caliche Lake was physically treated with rotenone. Lower and West Caliche Lakes were used as dilution/detoxification basins for treated water leaving Upper Caliche Lakes. There was no surface water outflow leaving West Caliche Lake. Water leaving West Caliche Lake was subterranean.

**Description of Lake Inlet(s)/Outlet(s) and Any Temporary Water Control Measures:** Upper Caliche Lake had two springs/inlets located at the northwest and northeast ends of the lake. Both springs/inlets were more marsh-like in appearance than typical flowing surface water streams. Upper Caliche Lake drained downhill from the south end of the lake into Lower Caliche Lake. Lower Caliche Lake drained from the south end for several hundred yards into West Caliche Lake. Water leaving West Caliche Lake was subterranean.

**Period of Toxicity:** Unknown. Upper Caliche Lake completely iced over during the week of November 22<sup>nd</sup>, 2010 and remained frozen until late-February 2011. Staff was unable to place live traps with sentinel fish into Upper Caliche Lake post treatment. Fished stocked post ice out survived well indicating that some time during ice over the lake detoxified.

**Eradicated Fish Species:** Yellow perch, smallmouth bass, rainbow trout, and pumpkinseed sunfish

**Results of Pre and Post Treatment Monitoring:** Prior to the treatment, Upper Caliche Lake, Lower Caliche and West Caliche were sampled for various water quality parameters including temperature, dissolved oxygen, pH, and zooplankton. Results from the pre-treatment water quality sampling are provided above. Post lake rehabilitation sampling for Upper Caliche included VOC, semi-VOC, and N-methylpyrrolidone within 24 hours and one month after the treatment.

**Impact on Non-Target Organisms:** None observed

**Brief Description of Treatment/Detoxification and Other Comments:** Treatment began and ended on October 26<sup>th</sup>. A pumper boat and airboat were used to apply powdered and liquid rotenone, respectively. Within a couple hours of treatment, stressed fish were observed along the shoreline and at the lake surface. Following the rehabilitation on October 26<sup>th</sup> and on the next day several thousand dead fish were observed along the shoreline and at the lake surface.

Species observed, in order of abundance, included yellow perch, smallmouth bass, pumpkinseed sunfish, and rainbow trout. Fish ranged anywhere from one to 20+ inches in length. The largest fish species observed were smallmouth bass and rainbow trout. No stressed or dead fish were observed in Lower or West Caliche Lakes the day of or after the rehabilitation.

The exact date Upper Caliche Lake detoxified is unknown. Following the rehabilitation, Upper Caliche Lake completely froze over the week of November 22<sup>nd</sup>, 2010 and remained frozen until late-February 2011. Staff was unable to place live traps with sentinel fish into Upper Caliche Lake post treatment. It's assumed that Upper Caliche Lake detoxified within a couple months post treatment.

**List of Lakes/Streams Proposed for Treatment Next Year:** None



CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife DATE: 11/15/2010  
1550 Alder St NW ALS JOB #: 1011011  
Ephrata, WA 98823 ALS SAMPLE #: -01  
CLIENT CONTACT: Chad Jackson DATE RECEIVED: 11/2/2010  
CLIENT PROJECT: Upper Caliche Lake COLLECTION DATE: 10/27/2010 14:00  
CLIENT SAMPLE ID: UC1-UC5 WDOE ACCREDITATION: C601

DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	11/02/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	11/02/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	11/02/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP

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## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Upper Caliche Lake

CLIENT SAMPLE ID: UC1-UC5

DATE: 11/15/2010  
ALS JOB#: 1011011  
ALS SAMPLE#: -01  
DATE RECEIVED: 11/2/2010  
COLLECTION DATE: 10/27/2010 14:00  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	11/02/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	11/02/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	11/02/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP

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**CERTIFICATE OF ANALYSIS**

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	11/15/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1011011
CLIENT PROJECT:	Upper Caliche Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID:	UC1-UC5	DATE RECEIVED:	11/2/2010
		COLLECTION DATE:	10/27/2010 14:00
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	11/03/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	11/03/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	11/03/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP

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**CERTIFICATE OF ANALYSIS**

<b>CLIENT:</b>	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	<b>DATE:</b>	11/15/2010
<b>CLIENT CONTACT:</b>	Chad Jackson	<b>ALS JOB#:</b>	1011011
<b>CLIENT PROJECT:</b>	Upper Caliche Lake	<b>ALS SAMPLE#:</b>	-01
<b>CLIENT SAMPLE ID</b>	UC1-UC5	<b>DATE RECEIVED:</b>	11/2/2010
		<b>COLLECTION DATE:</b>	10/27/2010, 14:00
		<b>WDOE ACCREDITATION:</b>	C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	11/03/2010	LAP
Phenanthrene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benz[a]Anthracene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Bis(2-Ethyhexyl)Phthalate	EPA-8270	2.6	2.0	1	UG/L	11/03/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benz[b]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benz[k]Fluoranthene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benz[a]Pyrene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Dibenzo[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	11/03/2010	LAP
n-Methyl-2-Pyrrolidone	EPA-8270M	8.8	0.050	1	UG/L	11/12/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	104	11/02/2010	GAP
Toluene-d8	EPA-8260	98.6	11/02/2010	GAP
4-Bromofluorobenzene	EPA-8260	101	11/02/2010	GAP
2-Fluorophenol	EPA-8270	46.3	11/03/2010	LAP
Phenol-d5	EPA-8270	41.1	11/03/2010	LAP
Nitrobenzene-d5	EPA-8270	99.5	11/03/2010	LAP
2-Fluorobiphenyl	EPA-8270	86.6	11/03/2010	LAP
2,4,6-Tribromophenol	EPA-8270	85.2	11/03/2010	LAP
Terphenyl-d14	EPA-8270	85.0	11/03/2010	LAP

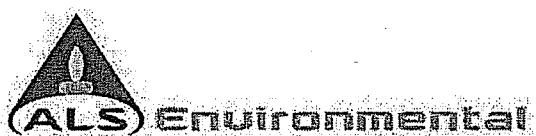
Page 4

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**CERTIFICATE OF ANALYSIS**

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	11/15/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1011011
CLIENT PROJECT:	Upper Caliche Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID:	UC1-UC5	DATE RECEIVED:	11/2/2010
		COLLECTION DATE:	10/27/2010 14:00
		WDOE ACCREDITATION:	C601

**DATA RESULTS**

U - Analyte analyzed for but not detected at level above reporting limit.

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**ALS Environmental**

**CERTIFICATE OF ANALYSIS**

**CLIENT:** WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

**DATE:** 11/15/2010  
**ALS JOB#:** 1011011

**CLIENT CONTACT:** Chad Jackson

**CLIENT PROJECT:** Upper Caliche Lake

**WDOE ACCREDITATION:** C601

**LABORATORY BLANK RESULTS**

**MB-110310W**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	11/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	11/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	11/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	11/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	11/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	11/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	11/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
Dibromoform	EPA-8260	U	2.0	1	UG/L	11/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	11/03/2010	GAP

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## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012016  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Upper Caliche Lake

DATE RECEIVED: 12/1/2010

CLIENT SAMPLE ID: UC1-IC5

COLLECTION DATE: 11/29/2010 14:00

WDOE ACCREDITATION: C601

### DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/03/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/03/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/03/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Chloroform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromoethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012016  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Upper Caliche Lake

CLIENT SAMPLE ID: UC1-IC5

DATE RECEIVED: 12/1/2010  
COLLECTION DATE: 11/29/2010 14:00

WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Chlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,1,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Ethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
m,p-Xylene	EPA-8260	U	4.0	1	UG/L	12/03/2010	GAP
Styrene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
o-Xylene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Isopropylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,1,2,2-Tetrachloroethane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichloropropane	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Bromobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Propyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
2-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3,5-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
4-Chlorotoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
T-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,4-Trimethylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
S-Butyl Benzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
P-Isopropyltoluene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,3-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,4-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
N-Butylbenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2-Dibromo 3-Chloropropane	EPA-8260	U	10	1	UG/L	12/03/2010	GAP
1,2,4-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Hexachlorobutadiene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Naphthalene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
1,2,3-Trichlorobenzene	EPA-8260	U	2.0	1	UG/L	12/03/2010	GAP
Pyridine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodimethylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Phenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Aniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,3-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,4-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzyl Alcohol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2-Dichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012016

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Upper Caliche Lake

CLIENT SAMPLE ID: UC1-IC5

ALS SAMPLE#: -01

DATE RECEIVED: 12/1/2010

COLLECTION DATE: 11/29/2010 14:00

WDOE ACCREDITATION: C601

**DATA RESULTS**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Chloroisopropyl)Ether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3&4-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitroso-Di-N-Propylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachloroethane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Nitrobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Isophorone	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dimethylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzoic Acid	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
Bis(2-Chloroethoxy)Methane	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1,2,4-Trichlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Naphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobutadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chloro-3-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
1-Methylnaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorocyclopentadiene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,6-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4,5-Trichlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Chloronaphthalene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dimethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,6-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Acenaphthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3-Nitroaniline	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrophenol	EPA-8270	U	10	1	UG/L	12/06/2010	LAP
4-Nitrophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenzofuran	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,4-Dinitrotoluene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
2,3,4,6-Tetrachlorophenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Diethylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluorene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Chlorophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP



## CERTIFICATE OF ANALYSIS

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012016  
ALS SAMPLE#: -01

CLIENT CONTACT: Chad Jackson

CLIENT PROJECT: Upper Caliche Lake

CLIENT SAMPLE ID: UC1-IC5

DATE RECEIVED: 12/1/2010  
COLLECTION DATE: 11/29/2010 14:00  
WDOE ACCREDITATION: C601

## DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
4-Nitroaniline	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4,6-Dinitro-2-Methylphenol	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
N-Nitrosodiphenylamine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Azobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
4-Bromophenyl-Phenylether	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Hexachlorobenzene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pentachlorophenol	EPA-8270	U	5.0	1	UG/L	12/06/2010	LAP
Phenanthrone	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Carbazole	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Butylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Butylbenzylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
3,3'-Dichlorobenzidine	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[A]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Chrysene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Bis(2-Ethylhexyl)Phthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Di-N-Octylphthalate	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[B]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[K]Fluoranthene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[A]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Indeno[1,2,3-Cd]Pyrene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Dibenz[A,H]Anthracene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
Benzo[G,H,I]Perylene	EPA-8270	U	2.0	1	UG/L	12/06/2010	LAP
n-Methyl 2-Pyrrolidone	EPA-8270M	3.2	0.050	1	UG/L	12/15/2010	ALSL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
1,2-Dichloroethane-d4	EPA-8260	97.3	12/03/2010	GAP
Toluene-d8	EPA-8260	95.0	12/03/2010	GAP
4-Bromofluorobenzene	EPA-8260	103	12/03/2010	GAP
2-Fluorophenol	EPA-8270	47.4	12/06/2010	LAP
Phenol-d5	EPA-8270	45.0	12/06/2010	LAP
Nitrobenzene-d5	EPA-8270	80.0	12/06/2010	LAP
2-Fluorobiphenyl	EPA-8270	70.8	12/06/2010	LAP
2,4,6-Tribromophenol	EPA-8270	77.0	12/06/2010	LAP
Terphenyl-d14	EPA-8270	91.8	12/06/2010	LAP



### CERTIFICATE OF ANALYSIS

CLIENT:	WA Dept of Fish and Wildlife 1550 Alder St NW Ephrata, WA 98823	DATE:	12/20/2010
CLIENT CONTACT:	Chad Jackson	ALS JOB#:	1012016
CLIENT PROJECT:	Upper Caliche Lake	ALS SAMPLE#:	-01
CLIENT SAMPLE ID	UC1-IC5	DATE RECEIVED:	12/1/2010
		COLLECTION DATE:	11/29/2010 14:00
		WDOE ACCREDITATION:	C601

### DATA RESULTS

U - Analyte analyzed for but not detected at level above reporting limit.

**CERTIFICATE OF ANALYSIS**

CLIENT: WA Dept of Fish and Wildlife  
1550 Alder St NW  
Ephrata, WA 98823

DATE: 12/20/2010  
ALS JOB#: 1012016  
WDOE ACCREDITATION: C601

CLIENT CONTACT: Chad Jackson  
CLIENT PROJECT: Upper Caliche Lake

**LABORATORY BLANK RESULTS****MB-120110W**

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	DATE	BY
Dichlorodifluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Vinyl Chloride	EPA-8260	U	0.20	1	UG/L	12/01/2010	GAP
Bromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Chloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichlorofluoromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Disulfide	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Acetone	EPA-8260	U	25	1	UG/L	12/01/2010	GAP
1,1-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Methylene Chloride	EPA-8260	U	5.0	1	UG/L	12/01/2010	GAP
Acrylonitrile	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Methyl T-Butyl Ether	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Butanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Cis-1,2-Dichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromoform	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,1-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Carbon Tetrachloride	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Benzene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trichloroethene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromomethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Bromodichloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Trans-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
4-Methyl-2-Pentanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
Toluene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Cis-1,3-Dichloropropene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,1,2-Trichloroethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
2-Hexanone	EPA-8260	U	10	1	UG/L	12/01/2010	GAP
1,3-Dichloropropane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Tetrachloroethylene	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
Dibromochloromethane	EPA-8260	U	2.0	1	UG/L	12/01/2010	GAP
1,2-Dibromoethane	EPA-8260	U	0.010	1	UG/L	12/01/2010	GAP